Middlesex Mech. Ass.

AMERICAN

RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, *Editor.*

ASSISTANT EDITORS:

JAMES T. HODGE, *For Mining and Metallurgy.*

CHARLES T. JAMES, *For Manufactures and the Mechanic Arts.*

SATURDAY, DECEMBER 14, 1850.

Second Quarto Series, Vol. VI., No. 50.---Whole No. 765, Vol. XXIII.

ESTABLISHED IN 1831.

NEW-YORK:

PUBLISHED WEEKLY, BY

JOHN H. SCHULTZ & CO.

Room 12, Third Floor,

No. 136 Nassau Street.

CAUTION

TO RAILROAD COMPANIES AND CAR MANUFACTURERS.

THE PATENT OFFICE having decided in favor of F. M. Ray as the first and true inventor of the India-rubber Railroad Spring, and against W. C. Fuller, who had claimed the same as his invention, and at whose instigation and that of Horace H. Day (who has manufactured the metallic or vulcanized rubber for such springs), several Railroad Companies have infringed, not only upon the rights of the said F. M. Ray, and rendered themselves liable for large damages, but also upon the patent rights of Charles Goodyear, against all of whom suits for damages for infringement will be commenced, in the event of failure to recover compensation speedily against Horace H. Day, against whom several suits are now pending:—all Railroad Companies are cautioned against infringing or pirating upon the said patent rights of said Charles Goodyear, or of F. M. Ray, by the use of such India-rubber car springs, and for all future infringements, actions will be immediately commenced.

Annexed is a copy of the official certificate from the Commissioner of Patents:

COPY.

U. S. PATENT OFFICE, WASHINGTON, D. C.,
12th September, 1850.

Sir—You are hereby informed that in the case of the interference between your claims and those of W. C. Fuller, upon which a hearing was appointed to take place on the second Monday in August, *the question of priority of invention has been decided in your favor.* I enclose a copy of the decision.

The testimony in the case is now open to the inspection of those concerned.

Yours respectfully,
Signed DELLITT C. LAWRENCE,
Acting Commissioner of Patents.

To Mr. Fowler M. Ray,
C. M. Keller, Esq., New York.

In conformity with the above decision, a Patent has been granted to me for the same invention for which Fuller had obtained a Patent dated October 8, 1850, and a bill has been filed in the U. States Circuit Court to repeal the Patent granted to Fuller.

In answer to the above, Mr. Knevitt states in his Advertisement in effect that Mr. Ray obtained his patent by *bribing the Commissioner.*

When a case has become so bad that parties in their desperation in defense of themselves are compelled, as a last resort, to attack the character of a person holding an office of such high honor and trust as that of Commissioner of Patents of the U.S., what reliance can be placed upon any of their statements? The character of the Hon. Mr. Ewbank, Commissioner of Patents, stands too high with the public to require any defense at my hands; and all attempts by Knevitt or Day to escape from the charges of having tried to deceive the public and railroad companies, by aspersing the character of Mr. Ewbank, and insinuating that he has been improperly biased or influenced in deciding against W. C. Fuller, and in my favor as the first and original inventor of the spring in question—will only recoil on themselves.

Now what was the question between Fuller and Ray thus decided in favor of Ray?

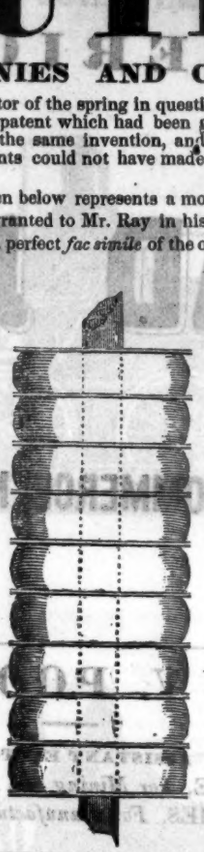
It was whether Fuller or myself was the first inventor of India-rubber springs, with metallic plates interposed.

On the 1st August, 1848, I obtained a patent for a form of spring, (about which there is no dispute) which consisted of a cylinder of India-rubber, with circular bands upon the outside circumference. This kind of spring in nineteen cases out of twenty, I may say, has been adopted as the best and most approved form of spring by railroad companies. The validity of this patent was not questioned in this controversy; but the question submitted to the Commissioner of Patents for his investigation and decision, and in respect to which a very large mass of testimony was taken, was whether W. C. Fuller or F. M. Ray was the first inventor of a form of spring, composed of alternate discs or rings of India-rubber, with metallic plates interposed, etc? That question has been decided *against* W. C. Fuller, an in *my favor, as the first inventor.*

There is no escaping from this decision, and the parties who hope to do so by injurious imputations against the Commissioner of Patents, who made the decision in this case, will be disappointed.

It will require something more, they will find, than mere assertions or insinuations to produce any distrust of the integrity of the Commissioner of Patents. The testimony in this case clearly proved that I was the first inventor of the spring in question, and justly entitled to the patent which had been granted to W. C. Fuller for the same invention, and the Commissioner of Patents could not have made any other decision.

The cut given below represents a model for which a patent was granted to Mr. Ray in his contest with Fuller. It is a perfect *fac simile* of the original invention.



A patent was granted to Fuller by the United States on the 22d October, 1846, under the title of "An improvement in Railway Carriages." At this time I was pursuing my experiments with a view to ascertain with greater certainty, the best form of spring for railroad cars, and knew nothing about the invention or patent of Fuller till I applied for a patent shortly afterwards, and received notice from the Patent Office of the interference with Fuller's which *this decision has settled against Fuller and in my favor.*

Knevitt says that I made the same application to Mr. Burke, the former Commissioner of Patents, which was refused, without giving the reason why it was refused, leaving it to be inferred without daring to make the assertion openly, that, as between Fuller and Ray, Mr. Burke had decided against Ray: whereas, the fact is, as the record of the case at the Patent Office will show, that the application was refused on the ground that there had been a patent granted in England to Lacy prior to either Ray or Fuller, and that objection, if correct, would prove fatal to a suit by Fuller upon his patent, as well as to a suit by me upon my patent for the same thing; but the Commissioner of Patents, upon a closer and fuller investigation of the English patent granted to Lacy, than was given to it on the first application, has decided that the patent to Lacy is not in the way of a patent either to Fuller or myself, for the form of spring in question—that is, alternate discs of rubber, with metal plates interposed, etc. And, as between Fuller and myself, *the Commissioner of Patents has decided that Fuller is not the first inventor, but that I am, and am entitled to the patent in question.*

It would seem unnecessary to add anything more; enough I trust has been shown to put the question at rest with the various railroad companies, the parties most interested in this decision.

I ought, perhaps, to say something in reply to Mr. Knevitt's statements in regard to his and Day's infringement upon Goodyear's patent by the manufacture and sale of Vulcanized rubber, and the publications which they have put forth to induce railroad companies to become parties to the infringement on said patent, and to get them involved in controversy; but as there are a number of suits against Day for damages to a large amount for infringement in this respect and other matters, and particularly as there is a suit by Goodyear against Day, which Day is under stipulation to try at the next March term of the U. S. Circuit Court, to be held at Boston, unless Day succeeds in putting it off, of which there is very little probability, as I am informed, I shall abstain for the present from saying anything about this subject.

Mr. Knevitt wisely declines to say anything about the suits of Charles Goodyear against Horace H. Day for damages for infringement of Goodyear's patent, by manufacturing for Knevitt the vulcanized rubber, of which all these springs, sold by Knevitt to railroad companies, were composed, and I leave both Day and Knevitt to answer to the few railroad companies whom they have deceived, and thus rendered liable for large damages for infringment of Goodyear's patent, in the best manner they can.

Knevitt does not pretend to deny that he has given false assurances to the few railroad companies whom he has thereby induced to infringe upon the springs, which the Commissioner of Patents has decided against Fuller, and in my favor, as the first and true inventor; but, for the purpose of diverting attention from this fact, he still continues to harp upon *a separate and distinct patent* of mine for railroad springs, which, he says, was for *India-rubber* and *air*, and has proved useless. How much truth there is in this assertion may be gathered from the following copy of the claims in that patent, and from the fact that the spring patented by me in 1848, is the most approved form, and the one adopted in nineteen cases out of twenty, and is used on nearly every railroad in the United States.

Copy of the claims in patent granted to Fowler M. Ray, August 1st, 1848:

FIRST—In combination with springs made of vulcanized India-rubber, substantially as above described, the use of hoops or bands on the external circumference at the ends, or between the ends, or at the ends, and at any required distance between the ends, substantially in the manner and for the purposes above described.

SECOND—I claim combining the elasticity of India-rubber cylinders, substantially such as herein described, with the elasticity of atmospheric air, or other permanently elastic gas, by closing up the ends of such India-rubber cylinders either with discs of India rubber, or the equivalent thereof, such as solid discs of metal, substantially in the manner and for the purposes specified.

This patent bears date 1st Aug., 1848.

I take no notice of the opinions of counsel cited by Knevitt. Knevitt ought to know that the paid opinions of lawyers employed in a case, will have no weight whatever. There are always two sides to all causes, and it is the business of counsel to advocate the cause of their clients.

F. M. RAY.

New York, October 1, 1850.

IRON BRIDGES, BRIDGE & ROOF BOLTS, etc. STARKS & PRUYN, of Albany, New York, having at great expense establishe. a manufactory with every facility of Machinery for Manufacturing Iron Bridges, Bridge and Roof Bolts, together with all kinds of the larger sizes of Screw Bolts, Iron Railings, Steam Boilers, and every description of Wrought Iron Work, are prepared to furnish to order, on the shortest notice, any of the above branches, of the very best of American Refined Iron, and at the lowest rates.

During the past year, S. & P. have furnished several Iron Bridges for the Erie Canal, Albany Basin, etc. —and a large amount of Railroad Bridge Bolts, all of which have given the most perfect satisfaction.

They are permitted to refer to the following gentlemen:

Charles Cook, Nelson J. Beach, Jacob Hinds,	Canal Commissioners of the State of New York.
Willard Smith, Esq.,	Engineer of the Bridges for the Albany Basin.
Messrs. Stone & Harris,	Railroad Bridge Builders, Springfield, Mass.
Mr. Wm. Howe,	Engineer & Bridge Builder, Utica, N. Y.
Mr. S. Whipple,	

January 1, 1849.

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to ¼ in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER Flues.

Manufactured and for sale by
MORRIS, TASKER & MORRIS.
Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

Fire Brick.

THE Subscribers have constantly on hand Rafford's Stourbridge, Oak Farms Stourbridge, Lister, Wortley, Red and White Welsh Fire Bricks, common and fancy shapes. Also,

ROOFING SLATES,

from the best Welch quarries, and of all sizes. Also

COAL,

of all kinds—Liverpool Orrell and Cannel, Scotch, New Castle, Pictou, Sidney, Cumberland, Virginia, and all kinds of Anthracite coals. Also,

Pig Iron, Salt, etc., etc., for sale at the lowest market price. Apply to

SAMUEL THOMPSON & NEPHEW,
275 Pearl and 43 Gold Sts., New York.

November, 23, 1849.

Patent India Rubber Steam Packing.

THIS article, made by the subscriber, who alone is authorised to make it, is warranted to stand as high a degree of heat *as any that has been or can be made by any person*—and is the article which has made the reputation of India Rubber Steam Packing and the demand therefor. A large assortment of all thicknesses requisite for any description of engines, steam pipes, valves, etc., constantly on hand and for sale by the manufacturer and patentee, who will give every information regarding its properties, mode of use, etc. at the warehouse. JOHN GREACHEN, JR.,
98 Broadway, opposite Trinity Church.

New York, October, 1849.

To Railroad Companies, etc.

The undersigned has at last succeeded in constructing and securing by letters patent, a Spring Pad-lock which is secure, and cannot be knocked open with a stick, like other spring locks, and therefore particularly useful for locking Cars, and Switches, etc.

Companies that are in want of a good Pad-lock, can have open samples sent them that they may examine and judge for themselves, by sending their address to C. LIEBRICH,
46 South 8th St., Philadelphia.

November 3, 1849. 6m*

RAILROAD India-rubber Springs.

IF any Railroad Company or other party desires it, the NEW ENGLAND CAR COMPANY will furnish India-rubber Car Springs made in the form of washers, with metalic plates interposed between the layers, or in any other form in which they can be made; in all cases guaranteeing the right to use the same against any and all other pretended rights or claims whatsoever.

F. M. Ray, 98 Broadway, New York.
E. CRANE, 99 State Street, Boston.
1849.

MACHINE WORKS OF ROGERS KETCHUM & GROSVENOR, *Patterson, N. J.* The undersigned receive orders for the following articles manufactured by them of the most superior description in every particular. Their works being extensive, and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and dispatch.

Railroad Work.—Locomotive Steam Engines and Tenders; Driving and other Locomotive Wheels, Axles Springs and Flange Tires; Car Wheels of Cast Iron a variety of patterns and chills; Car Wheels of Cast Iron with wrought tires; Axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and millwright work generally, hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,
Patterson, N.J. or 74 Broadway, New York.

THE NEWCASTLE MANUFACTURING Co continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack Screws, Wrought Iron Work and Brass and Iron Castings, of all kinds connected with Steamboats. Railroads, etc.; Mill Gearing of every description; Cast Wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.

ANDREW C. GRAY,
President of the Newcastle Manuf. Co.

DEAN, PACKARD & MILLS,

MANUFACTURERS OF ALL KINDS OF

RAILROAD CARS,

SUCH AS

PASSENGER, FREIGHT AND CRANK CARS

— ALSO —

SNOW PLOUGHS AND ENGINE TENDERS OF VARIOUS KINDS.

CAR WHEELS and AXLES fitted and furnished at short notice; also, STEEL SPRINGS of various kinds; and

SHAFTING FOR FACTORIES.

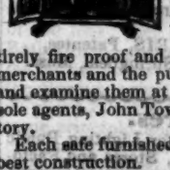
☞ *The above may be had at order at our Car Factory*

REUEL DEAN,
ELIJAH PACKARD, } SPRINGFIELD, MASS.
ISAAC MILLS,

1y48

Iron Safes.

FIRE and Thief-proof Iron Safes, for Merchants, Banks and Jewelers use. The subscriber manufactures and has constantly on hand, a large assortment of Iron Safes, of the most approved construction, which he offers at much lower rates than any other manufacturer. These Safes are made of the strongest materials, in the best manner, and warranted entirely fire proof and free from dampness. Western merchants and the public generally are invited to call and examine them at the store of E. Corning & Co., sole agents, John Townsend, Esq., or at the manufactory.



Each safe furnished with a thief-detector lock, of the best construction.

Other makers' Safes repaired, and new Keys and Locks furnished at the shortest notice.

H. W. COVERT,
cor. Steuben and Water sts. Albany

August 24, 1848.

Patent Self-clinching Railroad Spikes.

These spikes have been in use upon various roads for several years, and have met with universal approval by Engineers. They drive in the manner shown, turning themselves, and are therefore not liable to work loose. They will prove of great value to secure the chair.

We are also manufacturin railroad spikes, hook and fla head; wrought chairs, clamps, etc., of superior quality, and are prepared to contract for any pattern or weight upon favorable terms.

SMITH & TYSON,
25 South Charles st., Baltimore Md.

P. H. Griffin,

Corner of Steuben and James Sts. Albany, N.Y.,

CONTINUES to manufacture copper flues for locomotive boilers, brewers' coppers, stills, tanner heaters, etc. Copper work in general, at the shortest notice. He has constantly on hand brass cocks, brass valves, copper pumps of every variety.

Orders promptly attended to. 1y14

Mattewan Machine Works.

THE Mattewan Company have added to their Machine Works an extensive LOCOMOTIVE ENGINE department, and are prepared to execute orders for *Locomotive Engines* of every size and pattern—also *Tenders, Wheels, Axles,* and other railroad machinery, to which they ask the attention of those who wish such articles, before they purchase elsewhere.

STATIONARY ENGINES, BOILERS, ETC., Of any required size or pattern, arranged for driving *Cotton, Woollen, or other Mills,* can be had on favorable terms, and at short notice.

COTTON AND WOOLLEN MACHINERY, Of every description, embodying all the modern improvements, second in quality to none in this or any other country, made to order.

MILL GEARING,

Of every description, may be had at short notice, as this company has probably the most extensive assortment of patterns in this line, in any section of the country, and are constantly adding to them.

TOOLS,

Turning Lathes, Slabbing, Planing, Cutting and *Drilling Machines,* of the most approved patterns, together with all other tools required in machine shops, may be had at the Mattewan Company's Shops, Fishkill Landing, or at 66 Beaver street, New York.

WM. B. LEONARD, *Agent.*

Gloucester Iron Works,

GLOUCESTER, NEW JERSEY,

NEARLY OPPOSITE PHILADELPHIA.

THE subscribers having made extensive alterations in their works, are now prepared to receive orders for all kinds of Stationary and Marine Engines, Boilers, Locomotives, Sugar Mills, and every description of Mill Work.

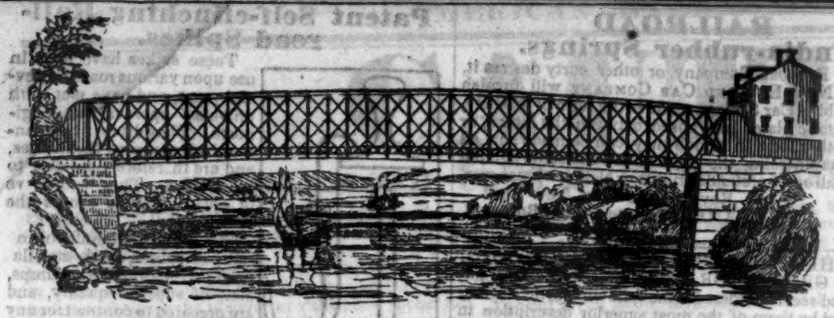
Also—Orders for Iron and Brass Castings executed with despatch.

Having secured the valuable services of Mr. David Matthew as Superintendent (who has been for five years foreman in the Iron Works of John Watchman, now the Vulcan Works, Baltimore, and for 12 years superintendent of the Mohawk and Hudson and the Utica and Schenectady Railroads, New York,) they feel confident that all orders entrusted to them will be faithfully executed.

Having an extensive Wharf in front of their works, it will afford a safe harbor for all classes of steam vessels that may require repairs during the winter.

C. M. & J. C. SITER.

Gloucester, July 24, 1850. 1m.



NEW YORK IRON BRIDGE COMPANY.

The Bridges manufactured by this Company having been fully tested on different Railroads, by constant use for more than two years, and found to answer the full expectations of their most sanguine friends, are offered to the public with the utmost confidence as to their great utility over any other Bridge now known.

The plan of this Bridge is to use the iron so as to obtain its greatest longitudinal strength, and at the same time it is so arranged as to secure the combined principles of the *Arch, Suspension and Triangle*, all under such controlling power as causes each to act in the most perfect and secure manner, and at the same time impart its greatest strength to the whole work.

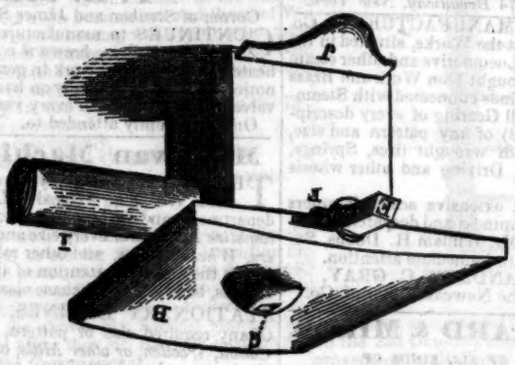
THE NEW YORK IRON BRIDGE COMPANY are prepared to furnish large quantities of Iron Bridging for Railroad or other purposes, at short notice, and at moderate prices.

Models, and pamphlets giving full descriptions of the above BRIDGE, with certificates based on actual trial from undoubted sources, will be found at the office of the Company, 39 Jauncey Court, Wall st., or of W. RIDER & BROTHERS, 19 *Nassau Street*, where terms of contract will be made known, and where orders are solicited.

M. M. WHITE,
Agent for the Company.

August 29, 1849.

E. Harris' Patent Rotary Blacksmith Tuyere.



LETTERS Patent were issued January 9, 1849, to E. HARRIS, of Springfield, for an Improved Rotary Blacksmith Tuyere. Since that time there have been some hundreds put in operation, giving satisfaction and full proof of superiority over all others.

This Tuyere is so arranged that by one movement it can be changed from the largest work to the smallest; at the same time the fire is changed in proportion, thereby making a great saving in coal. Words cannot convey the full merits of this Tuyere; nor is it deemed necessary to speak in disparagement of other Tuyeres, as every smith is capable of judging for himself, and will give merit where merit is due.

I will simply say that there has not been a single instance where I have had my Tuyere put in use but it has given full satisfaction, and is recommended by all who have used them, as being superior to any other ever introduced. I would invite all to give them a trial; and the names of those using them being given, I hope it may induce others to try them; they recommend themselves.

Western Railroad Shop,	Springfield,	Mass.
" "	Pittsfield,	"
Connecticut val.	Springfield	"
" "	N. Hampton	"
Hartford "	Hartford,	Conn.
New Haven "	New Haven	"
Norwich and Worcester,	Norwich	"
N. York and N. Haven,	New Haven	"
Saratoga and Whitehall,	Saratoga,	N. Y.
Vermont Central,		
Hudson and Berkshire,	Hudson,	
L. Kingsley,	Canton,	Mass.
Hadley Falls Co.	Ireland, W. Springfield,	Mass.
Sidney Patch,	Boston,	"
Ames Manuf. Cor.,	Chickopee,	"
American Machine w'ks,	Springfield	"
Dean, Packard & Mills	"	"
G. Frank Bradley,	N. Haven,	Conn.
Andrew Baird,	"	"
Collis & Lawrence	"	"
Slate & Brown,	Windsor Locks,	
Gage,	Nashua,	N. H.
Machine shop,	Manchester,	"
Louis F. Lanney,	Baltimore,	Md.
J. H. Baerdid,	179 Chambers st.	N. Y.
J. Fanning	Rochester,	"
G. W. Hunt	41 Gold st.	"
Chamberlain & Waldo,		"
P. S. Burges, carriage maker,		"
Samuel Miller,		"
J. Leggett,	Steverson falls,	"
J. E. Harris,	Hillsdale,	"
John L. Graham,	Albany,	"
David Dalsell,	South Egremont,	Mass.
Roys & Wilcock,	Berlin,	Conn.

Agents for the sale of Tuyeres:
B. B. Stevens in New York and Connecticut.
A. J. VanAllen has the Agency for the Western and Southern States, and is now travelling through those States. Any communication addressed to the patentee will receive prompt attention.

E. HARRIS, Patentee,
Springfield, Mass.

November 23, 1849.

Railroad Lanterns.

COPPER and Iron Lanterns for Railroad Engines, fitted with heavy silver plated Parabolic Reflectors of the most approved construction, and Solar Argand Lamps; manufactured by

HENRY N. HOOPER & CO.,
No. 24 Commercial St. Boston.

August, 16, 1849. 6m33

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings, Private Dwellings, Stores and Factories, manufactured by the subscriber in great variety. Orders by Mail, or left at the Factory on Causeway street, will be promptly attended to.

HENRY N. HOOPER & CO.

Boston, March 23, 1850. 6m13

F. M. Ray's Patent India-rubber Car Springs.

India-rubber Springs for Railroad Cars were first introduced into use, about two years since, by the inventor. The New England Car Company, now possesses the exclusive right to use, and apply them for this purpose in the United States. It is the only concern that has tested their value by actual experiment, and in all arguments in favor of them, drawn from experience of their use, are in those cases where they have been furnished by this company. It has furnished every spring in use upon the Boston and Worcester road, and, in fact, it has furnished all the springs ever used in this country, with one or two exceptions, where they have been furnished in violation of the rights of this company; and those using them have been legally proceeded against for their use, *as will invariably be done in every case of such violation.*

The Spring formed by alternate layers of India-rubber discs and metal plates, which Mr. Fuller claims to be his invention, was invented by Mr. Ray in 1844.—In proof of which we give the deposition of Osgood Bradley, of the firm of Bradley & Rice, of Worcester, Mass., car manufacturers, and men of the highest respectability. In this deposition, in relation to the right of parties to use these springs, he says:

"I have known Mr. Ray since 1835. In the last of May or the commencement of June, 1844, he was at my establishment, making draft of car trucks. He staid there until about the first of July, and left and went to New York. Was gone some 8 or 10 days, and returned to Worcester. He then on his retnrn said he had a spring that would put iron and steel springs into the shade. Said he would show it to me in a day or two. He showed it to me some two or three days afterwards. It was a block of wood with a hole in it. In the hole he had three pieces of India-rubber, with iron washers between them, such as are used under the nuts of cars. Those were put on to a spindle running through them, which worked in the hole. The model now exhibited is similar to the one shown him by Ray. After the model had been put into a vice, witness said that he might as well make a spring of putty. Ray then said that he meant to use a different kind of rubber, and referred to the use of *Goodyear's Metallic Rubber*, and that a good spring would grow out of it." There are many other depositions to the same effect.

The history of the invention of these springs, together with these depositions, proving the priority of the invention of Mr. Ray, will be furnished to all interested at their office in New York.

This company is not confined to any particular form in the manufacture of their springs. They have applied them in various ways, and they warrant all they sell.

The above cut represents precisely the manner in which the springs were applied to the cars on the Boston and Worcester road, of which Mr. Hale, President of this road speaks, and to which Mr. Knevitt refers in his advertisement. Mr. Hale immediately corrected his mistake in the article quoted by Mr. Knevitt, as will be seen by the following from his paper of June 8, 1848. He says:

INDIA-RUBBER SPRINGS FOR RAILROAD CARS.—"In our paper yesterday, we called attention to what promises to be a very useful invention, consisting of the application of a manufacture of India-rubber to the construction of springs for railroad cars. Our object was to aid in making known to the public, what appeared to us the valuable properties of the invention, as they had been exhibited on trial, on one of the passenger cars of the Boston and Worcester railroad. As to the origin of the invention we had no particular knowledge, but we had been informed that it was the same which had been introduced in England, and which had been subsequently patented in this country; and, we were led to suppose that the manufacturers who have so successfully applied this material, in the case to which we referred had become possessed of the right to use that patent. It will be seen from the following communication, addressed to us by a member of the company, by which the Worcester railroad was supplied with the article upon which our remarks were based, that we were in an error, and that the springs here introduced are an American invention, as well as an American manufacture. How far the English invention may differ from it we have had no opportunity of judging."

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED 1831.

PUBLISHED WEEKLY, AT No. 136 NASSAU ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. VI., No. 50] SATURDAY, DECEMBER 14, 1850. [WHOLE No. 765, VOL. XXIII.

ASSISTANT EDITORS,

J. T. HODGE, *For Mining and Metallurgy.*

GEN. CHAS. T. JAMES, *For Manufactures and the Mechanic Arts.*

PRINCIPAL CONTENTS.

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., 136 NASSAU ST.

Saturday, December 14, 1850.

Ocean Steam Navigation.

European and North American Railway.

The steamer *Arctic* brought information that the British Government has ordered a Commissioner to report as to removing the transatlantic mail station from Liverpool to the western coast of Ireland. The Liverpool Chamber of Commerce is in arms against it, and endeavors to cause great facilities to be given to the American trade and shipping of the port.

The completion of the railway to Galway in 1851 may produce the most important changes in the commercial intercourse between the two continents.

The project of the European and North American railway assumed that a speed of 17 miles an hour in ocean steamers might at some future time be attained.

The question is engaging great attention in Gt. Britain and the United States.

We have recently received a copy of the "ADVOCATE, *or Irish Industrial Journal,*" in which the matter is referred, and the navigation from Holyhead to Dublin is carefully considered, which we know will interest all parties connected with ocean navigation, and gladly transfer it to our columns.

THE HOLYHEAD AND DUBLIN STEAMERS.

Most persons are aware that the passage between Holyhead and Dublin was one of the first selected by the early promoters of steam navigation for their experiments on the open sea; and it is not a little interesting to those who, like myself, take an interest in the subject, to review its past history, and note its present state on this station. The distance from Holyhead to Howth, the original Irish packet station, is 54 miles; to Kingstown, the present one, 63. A passage better calculated to test the qualities of a sea-going steamer could not be chosen, for at times a more turbulent sea does not exist than is experienced on it. This is principally owing to the strong tides, the force of which is chiefly felt in the neighborhood of the Welch coast. The spring tides here are known to run at the rate of six miles an hour. One of the captains of the old sailing packets, in his evidence before a committee of the House of Commons, in 1822, stated, "I do not think I ever saw a more difficult channel to navigate, and I think I have now been 40 years at sea."

In 1819, David Napier placed on the station the *Talbot*, of 156 tons, built by Wood, of Port Glasgow, and fitted with two engines of the collective power of 60 horses, by himself. This was the first attempt, but though he may have continued running his vessels on other lines through the winter, it is certain that the Talbot did not ply for more than the summer and autumn of that year. In the following year, 1820, Napier placed another vessel, the *Ivanhoe*, of 158 tons, built by Scott, of Port Glasgow, with engines of 56 horse power, by himself, on the same line; but I cannot find that either this or the Talbot ran regularly throughout the year. Enough, however, was done to induce the postmaster general, who then managed the packet service, to take the matter up; and in 1821, steamers were regularly introduced between Howth and Holyhead for the conveyance of the mails, and partly superseded the old sailing packets. The Ivanhoe was purchased for this purpose, and two other steam vessels ordered to be built; these were the *Royal Sovereign*, of 200 tons, and the *Meteor*, of 190 tons; they were constructed by Evans, of Rotherhithe, under the direction of Oliver Lang, the master shipwright of Woolwich dockyard, on the diagonal principle. It is a little singular that 27 years later, almost on the same spot, on the same principle, and from the design of the no less celebrated son (O. W. Lang), was built the *Banshee*. The Royal Sovereign and Meteor proved very successful vessels, and so important was strength then considered that, excepting the discovery ships, Lang declared he knew of none stronger. The engines of each were made on the beam principle, by Boulton and Watt—the power of the Sovereign being 80, that of the Meteor 60: and it is curious now to find the commander of the former vessel, in his evidence before the Commons Committee of 1822, giving it as his opinion that, if anything, she was overpowered. We find it stated elsewhere in the same evidence, that the Sovereign's consumption averaged 8 cwt., and the Meteor's 5 cwt. of coals per hour, while the Talbot and the Ivanhoe used as much as 14 cwt. each in the same time.

In every other respect, the Sovereign and Meteor proved themselves the best vessels on the line.—From a Parliamentary return, the following particulars of the performances of the different packets for one year, viz: from June 1, 1821, to June 1, 1822, are extracted:

Vessel.	No. of passages.	Average passage to Howth.	Average passage to Holyhead.	Shortest passage to Howth.	Shortest passage to Holyhead.	Longest passage to Howth.	Longest passage to Holyhead.
Royal Sover'n	143	7·39	7·02	5·48	6·00	16·04	12·50
Meteor.....	147	8·16	7·17	6·15	5·30	17·20	23·10
Talbot.....	16	9·24	8·02	....	....	.....	.....
Ivanhoe	6	11·57	6·53	....	....	.....	.....
Tartar.....	20	15·27	9 48	.....	.....	.....	.....

NOTE.—The *Tartar*, of 180 tons, with engines of 60 horse power, by Cook, of Glasgow, on the horizontal plan, was used by the government as an experimental vessel, a Mr. Broderip being employed to make the machinery auxiliary to a sailing vessel, but without success. We find that in this year [the last of the sailing packets] they made in all 46 voyages, averaging 15 hours 2 minutes to Howth, and 14 hours 13 minutes to Holyhead.

In 1824 the Sovereign and Meteor were withdrawn from the station, and the *Aladdin*, *Cinderella* and *Harlequin*, put in their places. All these vessels were, I believe, built in London, and their engines from Boulton and Watt's factory. They were all nearly of the same dimensions; the tonnage of each was 234, and the power 80, afterwards in 1831, increased to 100. The following are the dimensions, etc., of the Cinderella, built in 1823, by Wigram & Co., Blackwall:

	Feet.	In.
Length over all.....	119	9
Ditto between perpendiculars.....	116	6
Extreme breadth.....	37	10
Depth.....	12	6
Diameter of cylinder.....	35	6
Length of stroke.....	3	6
Diameter of wheel.....	13	2
Horse power.....	80	

Three other vessels—the *Escape*, *Wizard* and *Dragon*—of the same class, were subsequently added. The Parliamentary returns state that the

shortest voyage made by any of these vessels in 1830, was in 5 hours 26 minutes; and in 1831, 5 hours 14 minutes. The average of the quickest vessel, the Harlequin, previous to the alterations in her engines, was to Howth, 7 hours 20 minutes; to Holyhead, 6 hours 22 minutes; and the consumption of each in 1826, is stated as under:

	Cwt.	lbs.
Aladdin, per hour	14	68
Cinderella "	11	94
Harlequin "	11	42
Escape "	11	55
Wizard "	13	107
Ivanhoe "	9	12

These vessels were in time superseded by others, but until 1848 no material change took place in the class employed; and the average time occupied in the passage, after Knightstown was substituted for Howth as a packet station, in 1828, may be given as 6 hours. The establishment of another line of mail packets, in 1826, between Kingstown and Liverpool, materially interfered with the Holyhead traffic; and after the opening of the railway to Liverpool in 1838, it almost ceased, although four boats still continued to ply.

Such was the state of things until 1848, when the partial completion of the Chester and Holyhead railway promised a restoration of much of the old traffic to its former route. The four absolete admiralty packets were transferred to other stations, and their places supplied by others, of a class hitherto unknown. The railway company had obtained powers, though not till after a severe struggle, to run steamships in connection with their trains, and had ordered the construction of four of a class fully equal to those of the government. It is not my province to discuss—which has already been pretty fully done—the question of the propriety of the government becoming competitors with a company, who had already incurred such enormous liabilities in their endeavors to effect a truly national undertaking, and bring Dublin within an easy 12 hours' distance from the metropolis; I merely look upon the fact of eight steamships, constructed by the most eminent builders and engineers in London and Liverpool, as a very interesting one, and which enables us to judge of the progress made in these departments of science in the two places. The admiralty vessels were first in the field, and the earliest launched was the *Caradoc*, in the autumn of 1847. She was constructed of iron, by the late firm of Ditchburn & Mare, Blackwall, from the designs of Sir Wm. Symonds, the Surveyor of the Navy; and her engines on the direct action principle, by Seaward & Co. Her tonnage is 662, and her power 350. This vessel did not, on her trial trip in the Thames, realise the expectations formed of her, nor has she proved by any means among the best of the Holyhead boats. The next on the list is the *Banshee*, built of wood, chiefly mahogany, by Thompson, of Rotherhithe, and her engines [oscillating] by Penn & Son, Greenwich; she, as before stated, was constructed from the designs of O. W. Lang.

The Banshee had several rivals; but I believe I may say, that for beauty she is admitted by all to be unequalled. She was launched at the close of 1847, and in January, 1848, her trial trip took place. On that occasion her performances exceeded anything before realized, her average speed being 18¼ statute miles per hour; with wind and tide she went 21 miles per hour, and against ditto, 18; or the measured mile in the Thames, in 3 minutes 15 seconds, and 4 minutes 20 seconds, respectively.

The *St. Columba*, of iron, by Laird, of Birkenhead, and engines by Forrester, of Liverpool, was next ready for sea; and the Holyhead railway not being as yet open, she, with the Banshee, was placed, in March, for a short time, on the line between Kingstown and Birkenhead. A trial trip took place early in the month between the two vessels, when, in the run from Liverpool to Kingstown the Banshee beat her competitor by one hour exactly. On one occasion the Banshee made the passage, 130 miles, in 7 hours 7 minutes; and when employed, in the summer of 1848, to convey Lord John Russel to Glasgow, she made the run from Kingstown in 12 hours—a remarkable performance. Wise people, however, shook their heads and said, "Wait till the winter comes, and see how she and the others will behave." The winter came, and with it many a hard gale, but the Banshee behaved right well, if not the best of all and at the present time she shows no diminution of speed, and is generally but little the worse for the hard work she has gone through. The *Llewellyn*, of iron, with oscillating engines by the same parties who built her, Miller & Ravenhill, of Blackwall, came upon the station in August, 1848, when the Holyhead railway was opened. Great expectations were formed of her, nor were they altogether unfulfilled. On her trial trip she averaged 17·89 miles per hour, and her subsequent performances rank her next to the Banshee in speed. A great deal has been said about this vessel's capabilities, and her performances have been, by interested parties strenuously puffed—but when it appears on a close examination, that she has, with the exception of the *Caradoc*, performed less work than any of the rest, and cost far more for repairs, there is surely small room for boasting here.

In August, 1845, and September, the Chester Railway Company's steamers—*Anglia*, *Cambria*, *Hibernia*, and *Scotia*—commenced running. The whole of these vessels are of iron; the *Anglia* was built by Mare, of Blackwall, engines by Maudslay, on the double-cylinder principle; the *Cambria*, by Laird, of Liverpool, engines by Forrester; the *Hibernia*, by Vernon, of Liverpool, engines by Bury; and the *Scotia*, by Wagram, of Blackwall, engines (double-cylinder) by Maudslay.

The service performed by the Admirality and railway boats, in their first introduction in 1848, was pretty similar, being confined to one passage each way daily.

The former conveyed the daily mail from Dublin, and the night one from London; and the latter, by leaving Kingstown early in the morning, enabled passengers to reach Holyhead in time for the afternoon express-train, which arrives about 11 P. M., in London. The same vessel awaited the arrival of the down express-train from London, and was generally due at Kingstown about 10·30 P. M. Since the completion of the Britannia-bridge, the arrangements of the company have been slightly altered, but up to the present time no material alteration has been effected. It should, however, be observed, that while the Admirality have allowed 5 hours 35 minutes, and 5 hours 55 minutes for their vessels to complete their passage in, the Railway Company have limited theirs to 5 hours 5 minutes, and I believe that the instances in which they failed to arrive at Holyhead in time for the train, are not more numerous than the Government ones.

In July, 1849, the discontinuance of the night mail, *via* Liverpool, and its tranference to the Holyhead station, necessitated a double passage each way, and the work performed by the Admiralty steamers, became in consequence, much heavier, and in winter time occasionally of a very difficult character.

The speed of the *Banshee* may yet be reached by ocean steamers from Galway to Canso.

In connection with this matter, we take pleasure in transferring the following from the Morning Chronicle, of October 31st, in reference to the plan for shortening the time of passage between New York and London.

The Chronicle is the present ministerial organ, and its reference to the question in connection with the recent movements, to establish a steamship terminus on the west coast of Ireland, has more than ordinary significance.

We have only to hope that Nova Scotia will not falter in the work, or abandon the plan adopted at the Portland Convention.

[*From the London Chronicle, Oct.* 31.

THE EUROPEAN AND NORTH AMERICAN RAILWAY.

The great importance of this project, or any other based upon the same principle, to the United States, is so evident that it does not require further notice, but to the British provinces and in connexion with them to Great Britain, the advantages are so vast, that it may not be out of place to point out where, and in what way, they may be best employed. The railway, as proposed, will extend to Waterville, in the State of Maine, from thence by way of Portland to Boston, New York, and other Cities in the United States now connected by railways, thus affording a rapid and uninterupted transit, from the extreme point of Nova Scotia, on the Atlantic, to the shores of the Mexican Gulf. This will be of mutual advantage to the commercial relations between Great Britain and the United States. But the establishment of a railway communication between the landing point in Nova Scotia and Canada, by way of New Brunswick, is of political importance to Great Britain and her colonies that can hardly be estimated. The railway made once to the borders of Nova Scotia, or into New Brunswick, can be extended, if needed, direct to Canada, without entering the United States—thus securing a transit through a British territory for all political, or, if necessary, commercial purposes, though this it is to be hoped, will never be required by any disturbance of the peace between the two countries. On the contrary, this communication between the citizens of the United States and British subjects, for the promotion of commercial enterprise to which war has, and always will be destructive, cannot but promise additional security, by the tie of common interest for its maintenance.

The convention appears to have selected Galway, on the west side of Ireland, and Whitehaven, Cape Canso, Nova Scotia, for packet stations. The distance between the two ports is about 2000 miles, and assuming a speed of 17 miles an hour for steam vessels, the Atlantic can be crossed from point to point in five days. Thus by a railway from New York to Halifax, or Canso, by a fast steam packet, from thence to Galway, crossing by the great midland railway from Galway to Dublin, from thence to Holyhead, and from Holyhead to London, the passage from New York to London may be reduced to seven days time, employing about 1200 miles of a railway and 2000 miles of steam navigation.

The packets employed shonld be used for passengers and mails only, carrying as little weight as possible. Vessels designed for crossing the ocean with speed should not carry merchandize. Screw vessels will carry emigrants occupying only a few days longer on the voyage, and by using the railways, place them at their destination in one-third the usual time occupied. The movement in favor of this railway has been strengthened by the assistance given by our own government to the Midland Great Western Railway of Ireland, from Dublin to Galway, and to the general interest now shown them in the selection of some port in the south or west of Ireland for a packet station to America. Of the advantages Ireland would derive from such an establishment, an estimate can hardly be formed; but to make her the highway and place of embarkation to and from the New World, for the tens of thousands who annually cross the Atlantic, must bring advantages that will materially aid in rescuing her from the misery and degradation under which her people are now suffering. The project has been taken up warmly both in the United States and in the British Provinces, and parties of respectability have offered to take large amounts of stock.—The members of the several legislatures have promised to advocate the grant of public lands and other assistance by the States through which the railway will pass, and it is to be hoped that the promoters may find any appeal they may make in this country, either to the government for countenance, or to the public for assistance, receive the attention it deserves—From all that is shown it promises well as an investment for capital, but that it is an undertaking of great importance, both politically and commercially, is beyond contradiction. It may interfere with the particular interests of companies now established, and may divert some portions of trade from the present channels; but the British provinces and consequently the mother country, will be great gainers if this enterprise is accomplished, and in this sense the public will value it.

The Great Tunnel on the Baltimore and Ohio Railroad in Preston Co., Va., is said to be progressing with great rapidity. The Contracters, Mesrs. Lemon, German and Clarke & Co. work 360 hands during twelve hours of the day, and have already penetrated about 2,100 feet, or more than half the distance.

Internal Improvements of the State of New York.

A SKETCH OF THE RISE, PROGRESS, AND PRESENT CONDITION OF INTERNAL IMPROVEMENTS IN THE STATE OF NEW YORK.

Continued from page 770.

In his annual message, in January, 1827, Mr. Clinton called the attention of the Legislature to the question of internal improvements by the general government. "It has become a question of great moment," says the message, "whether the general government has power, with or without the consent of the state governments, *to construct canals and roads in their territories*, and whether such power, if not already vested, ought not to be granted? High authorities are to be found on both sides of this question; and after devoting to it all the consideration which, from its importance, it is entitled, I think it due to a sense of duty and a spirit of frankness, to say, that my opinion is equally hostile to its possession by, or its investment in, the national authorities. I can perceive it in nothing less than the harbinger of certain destruction to the state governments." He, however, expressed an opinion favorable to the distribution of any surplus to the state governments, to be used by them for internal improvements.

At the time this was written, the general government, on the recommendation of Mr. Adams, was about embarking in an extensive scheme of internal improvements. And at the preceding session of our Legislature, Mr. Wright had introduced a resolution into the Senate, declaring "that the power to appropriate the funds or moneys of the Union, *to the construction of roads, canals, and other internal improvements, through the respective states*, is not vested in Congress by the Constitution of the United States;" and it protested against the exercise of the power until it is expressly given.

Mr. Clinton gives his views in regard to the canal fund, and the payment of the canal debt, as follows:—"By the Constitution, this fund cannot, nor ought it, to be diverted from its designated object. This state has derived great reputation from its enterprise in undertaking. and its perseverance in executing, a work of immense benefit, and it ought to set another example of the extinguishment of a great public debt. This precedent will be more beneficial in itself, and more animating in all its aspects and consequences, than any fugitive or even permanent advantages that can emanate from another course."

The tolls for 1826, the first year after the completion of the Erie Canal, were, on that canal, $677,466 75—on the Champlain, $84,536 83. The quantity of property passing towards tide water, below the junction of the two canals, near Cohoes, was 269,795 tons. Merchandise ascending from West Troy, 31,639 tons: total, ascending and descending, 301,434 tons. Increase from the preceding year, 82,360 tons.

The total quantity of property passing Utica, east and west, in the navigation season of 1827, was 194,091 tons, of which 24,439 tons was merchandise. In 1828, the quantity was 214,110 tons, 33,348 tons being merchandise. Owing to the failure of the wheat crop in 1828, the decrease in the wheat and flour compared with 1827, was estimated by the collector at Utica, to be equal to 1,100,000 bushels of wheat, causing a reduction of $75,000 of toll.

There came to Albany on the canal in 1828, 236,904 tons, and there passed through the side-cut to Troy, 56,443 tons; total coming to tide water, 293,347 tons. The merchandise and other articles going from tide water amounted to 56,792 tons; total, ascending and descending, 350,139 tons.

The completion of the Erie and Champlain Canals was followed by immediate applications to the Legislature for the construction of other canals in almost every section of the state. The estimates of the public officers that the revenues of these great and expensive works would pay for their construction in ten years, afforded the applicants for extending the system, arguments too powerful to be resisted by the ordinary defences set up in behalf of the treasury.

At the commencement of the works for connecting the lakes with the Atlantic, and for several years during their progress, a strong opposition existed, and it was important that the annual reports should show that, so far as these canals were concerned, the revenues set apart were sufficient for the payment of interest and the ultimate reimbursement of the principal of the canal debt. This embraced the canal system as contemplated by the act of 1817, and it was not incumbent on those entrusted with the management of the canal finances to anticipate that new works would be undertaken without the adoption of an equally safe system of finance. But when applications were presented for thirteen hundred miles in extent of canals and roads, it became the duty of the canal and finance committees, to show to the people and their representatives, the important facts, that the Erie and Champlain Canals, at the time of their completion, had been aided by auxiliary funds to an amount equal to one-third of the cost of their construction; and that in borrowing money for new canals and roads, the state had no more resources which could be set apart for the payment of interest or principal. It was obvious, also, that the Erie and Champlain Canals, connecting extensive navigable waters, possessed advantages for the accumulation of revenue, which could not be realised by the construction of canals elsewhere. If these canals, thus favorably situated, and aided by the five millions of extra revenues, could pay for themselves in ten years, it was not fair to infer, as was done by the advocates for new works, that the state might safely embark in a system for the construction of seven or eight hundred miles of canals, and anticipate the same favorable results, when the routes possessed none of the advantages of the Erie Canal, and when there was no auxiliary funds to aid any of them.

It was to correct erroneous impressions, and under a strong conviction that the financial system adopted by the act of 1817 must be adhered to in order to preserve the credit of the state untarnished, that Mr. Wright, then chairman of the canal committee of the Senate, made his celebrated report in 1827, on the petition for a canal from Olean to the Erie Canal. The advocates of an extended system of roads and canals, and particularly interested parties, regarded this report as a measure of deliberate hostility to internal improvements; but it was in all respects a truthful exposition of the financial condition of the state, and only insisted on such a system as should make the progress of internal improvements subordinate to the condition of the finances. Instead of being opposed to the system of internal improvements generally, Mr. Wright, who took his seat in the Senate in January, 1824, had voted for all the appropriations for finishing the Erie and Champlain Canals, and the Oswego, and Cayuga and Seneca Canals. The Oswego Canal was aided by an appropriation of lands in the Onondaga Salt Springs Reservation, which has yielded $213,000. The Cayuga and Seneca Canal, which cost $237,000, had no aid from auxiliary funds, but the route for its construction was very favorable, and it connected the Erie Canal with about seventy miles of navigation in the Cayuga and Seneca Lakes.

The report of Mr. Wright, after reviewing the condition of each of the state funds, and showing that, after giving the unappropriated lands to the school fund, as had been done by the Constitution of 1821, and the auction and salt duties to the canal fund, by the act of 1817, and the discontinuance of the half mill tax in 1826, there was a deficit of $96,750 in the revenues of the general fund to meet the annual expenses, came to the following conclusion:—

"From these facts the conclusion is irresistible, that the state has not the means of appropriating an auxiliary fund for the construction of the canal now before the committee; that without such auxiliary aid, the means for its construction must be obtained upon the public credit entirely, and the money to pay the interest upon the debt so created, must also be borrowed." And as the committee were not satisfied that the prospect of revenue on this canal would justify its construction at the public expense, they reported against it. Mr. Colden, one of the earliest and most ardent friends of internal improvements, was on the committee, and concurred with Mr. Wright in the conclusions of the report, and he himself made a report at the same session, against commencing the Canal at that time.

The canal which Mr. Wright reported against, contemplated a connection between the Erie Canal at Holley, Orleans County, and the Alleghany river, at Olean, 103 miles in length, with 1,331 feet of lockage, and the total cost of the whole work, with wooden locks, was estimated by the engineer who surveyed the line, at $600,382 83. The canal from Olean to Rochester is eighteen or twenty miles longer, with a tunnel and a little less lockage.* There has already been expended in the construction of the Genessee Valley Canal $3,976,200 29; and this does not include the sum of $1,840,655 95 paid on account of interest on the sum borrowed for the construction of the canal, making a total of $5,816,856 17. The canal is to be 118 miles long, of which 50 miles have been in navigable condition since 1840, and 36 miles more are to be ready in 1851, leaving 32 miles on which the work has not been commenced since the suspension in 1842.—Since 1840, there has been paid for repairs, &c., on the navigable portion of the canal, $254,608 18, and received for tolls in nine years, $177,640 96.

These results show that the credit of the state would have been subjected to hazard by commencing the work without making adequate provision for the money borrowed for its construction. Whatever might be claimed for its contributions to the Erie Canal, nothing could be derived from that source for many years, as the canal revenues were secured to another object by a constitutional pledge. The tax with which the Treasury had been aided from 1816 to 1852, and from which an aggregate sum of more than three millions of dollars had been realized, was discontinued the year before Mr. Wright made his report, notwithstanding its continuance was recommended by Governor Marcy, who was at that time Comptroller. Mr. Wright saw in this the settled determination of the Legislature not to aid the Treasury by a tax, when its resources were insufficient for the ordinary support of the government without it—the canal fund was tied up for at least ten years, and the school fund had been placed by the Constitution beyond the reach of the Legislature. In this state of things, the preservation of the credit of the state, and of a sound system of finance, made it necessary to resist the numerous applications for internal improvements made at that period. The firm stand taken by Mr. Wright in favor of maintaining the credit of the state in all its financial operations, was attributed to a feeling of opposition to internal improvements, although the committee stated their views in the report in the following explicit language:—

"That the observations made by the committee in the foregoing report, so far as they relate to the Erie and Champlain Canals, are intended merely as a financial view of the canalling policy of the state, for the purpose of enabling the Senate the better to determine how far that policy may safely be extended at the present time, they believe it is not necessary for them to declare. That any inference can be drawn from any of the positions taken in this report, going to show that the committee, or any member of it, is unfriendly to these stupendous works, they cannot for a moment admit. That they are fully sensible of the immense benefits derived to the population of the state from the construction of these canals, and as deeply conscious of the wisdom of the policy which dictated these expenditures, as any other citizens of this state, they believe to be true. That the benefits and facilities to be furnished to the community, and the substantial wealth to be added to the state by the increasing business and prosperity of its citizens, and not the profits to be derived to the Treasury, are the great considerations in such expenditures, they admit, also, to be correct in principle; subject always to the antecedent condition, that the treasury is able to sustain the expense, or that, if the public credit is to be pledged, the means of sustaining it without burdening the taxable inhabitants, are morally certain."

Mr. Wright demonstrated, in this report, that if

* James Geddes estimated the cost of the Genessee Valley Canal in 1826, 111 miles, at $875,588; Wm. Jones had previously estimated it at $633,031. In 1835, F. C. Mills estimated the cost, 102 miles, at $1,890,614. In 1839, the same person made an estimate of $4,289,269. The canal has 1,150 feet of lockage, and 114 locks.

all the money applied to the Erie and Champlain Canals had been borrowed, (as must be done in all cases of the lateral canals,) the debt for those canals at the close of 1836, would have been $10,207,328, instead of $7,672,782 24, the amount of the outstanding stock at that time. And it has since been demonstrated by actual results that, while the stock debt was provided for in ten years by the canal fund, the revenue from the tolls of the canals, unaided by auxiliary funds, would not have paid the debt in less than twenty years from the time the canals were completed.—*Merchants' Magazine.*

To be continued.

FINANCES OF OHIO.

We learn by the Governor's message that the total amount of the debt of the State on the first of January, 1851, will be as follows:

Foreign debt		$16,566,773 69
Domestic bonds	493,824 00	
School and trust funds,	1,683,996 63	
		$18,744,594 32

The following is a summary statement of the receipts and expenditures of the fiscal year, ending on the 15th November, 1850:

RECEIPTS.

General Revenue received during the year 1850,	$275,901,02 0
Canal Tax, including $175,000 00 sinking fund,	988,433,29 0
Canal tolls and water rents,	728,985,73 0
Balance in the Treasury on the 15th November, 1849,	555,430,40 3
Miscellaneos,	544,138,43 5
	3,091,993,80 0

EXPENDITURES.

Paid General Assembly, Judicial and State Officers, State Institutions, claims, and incidental items,	$391,186,48 1
Paid for repairs of Public Works,	329,595,00 0
Repairs of National Road, etc.	47,242,66 0
Interest on Domestic Bonds,	28,694.66 0
Interest on Foreign Debt,	1,022,358,95 0
Common School Fund Distributed,	200,000,00 0
Interest on special School and Trust Funds	97,272,81 0
One per cent on surplus Revenue,	8,530,36 1
Fund Commissioners on account of State Debt,	657,886,34 3
Balance remaining in the Treasury on the 15th November, 1850.	132,066,12 1
Miscellaneus,	177,160,42 0
	$3,091,993,80 0

Tennessee.

Iron for the Tennesse and Georgia Railroad.—The ship India, Capt. Willis, from Rill, England, arrived at this port yesterday, has on board 3608 iron consigned to Mr. P. Teeft, for the Georgia and Tennesse Railroad.—*Sav. Georgian.*

New York.

Ogdensburgh Railroad.—The following are the earnings of the Northern (Ogdensburgh) Railroad, for the month of November, 1850.

From Freight	$22,526 08
Passengers	6,374 12
	$28,900 17
Earnings in October	22,105 66
Total, for two months,	$51.006 95

Tehuantepec Railroad.

The following compose the principal part of the corps of Engineers who sailed in the steam ship Alabama, for New Orleans, for the purpose of acing the line of railroad across the Tehuantepec Isthmus: Maj. J. G. Barnard, of the U. S. corps of Engineers, Chief Engineer; J. J. Williams, of New York, Principal Assistant; George F. Dunbar of New Orleans, do.; Dr. Canter, of New Orleans, Physician; Passed Midshipman Temple, U. S. N. Hydrographic Assistant; Passed Midshipman Murphy, U. S. N. do. Mr. Mechlin, U. S. Coast Survey, do.: Mr. de Lacey, of New Orleans, do.; Mr. H. P. Andrews, Clerk.

Georgia.

Milledgeville and Eatonton Rail Road.—We learn from the Savannah Rupublican that the arrangement for constructing the proposed railroad, from Eatonton to Milledgville, may be regarded as completed. The road will cost about $130.000 of which $120,000 are subscribed. It is understood that a very small subscription (a few thousand dollars) on the part of the citizens of Savannah, will finish the business. This subscription we are assured there will be no difficulty in obtaining. The road when completed will throw some 20,000 bags of cotton into this market, not usually received here. The plank road from Sparta to Tennille will complete all the connections of the Central road which will be demanded for years to come.

Atlanta and West Point Railroad.—We had the pleasure, on Tuesday last, says the Atlanta Intelligencer, of passing over that portion of this road which is already finished. The track is now completed to within one mile of Fairburn, eighteen miles from Atlanta. The track has been laid with a substantial T rail, and the work is going a head with great rapidity. A considerable force is now employed in laying down the iron, to be continued on this department of the work until the entire road is in running order to West Point. The new engine "Lagrange" is at present running daily, conveying the iron and other materials from this city to supply the workmen as fast as they progress with the work of laying down the rails. The original charter for this road, it will be remembered, only extended from Atlanta to Lagrange, but during the last session of the Legislature it was so amended as to extend to West Point.

The contract for that portion of the road between Lagrange and West Point has been let on favorable terms, and the grading has already commenced in the vicinity of Lagrange. The force has been so disposed throughout the whole line that the work in all parts will be pushed forward with the greatest possible despatch. This road unites with the Macon and Western railroad, about six and a half miles from Atlanta, and we understand that arrangements have been made for substituting, on this portion of the Macon and Western road, a heavy T rail instead of the flat one now used. With no serious or unlooked for obstacles to impede the progress of the work, a year and three months will see the line of railroad from this city to Montgomery, Ala., in complete running order. From our observations of the portion thus far finished, we are convinced that the Atlanta and West Point railroad will be one of the most substantial and durable roads in the United States.

BRIDGE OVER THE OHIO AT LOUISVILLE.

A bill is now before Legislature of Kentucky for the incorporation of a company to bridge the Ohio at Louisville. The capital stock of the company is fixed at $600,000. The bridge is to be 100 feet above low water, and not to have a span less than 100 feet. The company is to provide competent pilots, and to be liable for all injury sustained by vessels in passing the bridge that have such pilots aboard, and not to be liable for any damage sustained by boats that refuse the company's pilots. The tolls of the bridge are at no time to exceed 12 per cent. on its cost. If any slave is allowed to cross the bridge without a written passport from his owner, the company is to be held liable for the value of such slave, and ten per cent. in addition.

THE UNITED STATES MINT.

The *North American* gives the following statement relative to the operations of the Mint for the month of November:

Gold dust deposited during the month	$4,400,000
Coinage during the same period	4,104,000
Aggregate receipts of California gold dust from Jan. 1 to Nov. 30, inclusive	27,350,000
From other sources	1,200,000
Total receipts—eleven months	$28,550,000

Baltimore and Ohio Railroad.

The revenue of the Baltimore and Ohio railroad for November have been as follows:

	For Passengers.	For Freight.
Main Stem	$25,802 36	$84,544 87
Washington Branch,	19.091 71	4,614 67
Total	$44,894,17	$89,159 54

Making an aggregate of $110,347 33 on the Main Stem, and $23,706 38 on the Washington Branch—the total being $134,053 71.

IMPORTS OF THE UNITED STATES.

The Treasury Statistics will make the following exhibit of the last fiscal year:

Gold Bullion	$9,257,240	
" Specie	1,600,722	
		$10,857,962
Silver Bullion	$26,316	
" Specie	2,825,820	
		2,852,136
Iron and Steel		23,100,607
(Of which amount $8,141,901 was of Bar Iron)		
Woollens		15,966,784
Cottons		19,896,630
Silks		17,069,616
Silk and Worsted		1,653,809
Flax, Linens, &c.		8,095.022
Teas, pounds, 28,752.847		4,588373
Coffee, " 144,986,895		11,213,076
Spirits, (Brandy, Cordials, etc.,)		3,166,841
Sugar, [white $846,939: loaf $48.664; brown, $6,659,543]		7,555,145
Salt, bushels, 11,224,185		1,237,186
Guano, tons, 8940		91,984
Coal, " 180,439		378,817
Total amount of Imports, 1850		$187,217,574
From this should be deducted the foreign Exports amounting to		14,951,808

VIRGINIA MINERALS.—The *Richmond Enquirer* has seen a very rich and beautiful specimen of plumbago, turned by a plow on the land of John R. Edmonds, Esq., of Halifax County. There is a mine of substance running half a mile throngh a hill, and which appears to be inexhaustible. It lies in lamina, very similar to coal deposits. The bed lies about half a mile from Bannister River, navigable for batteauv as far as Weldon, whence the plumbago may be transported to Norfolk and other markets. The specimen refered to is used to advantage in converting into steel and in the finest and most delicate castings of iron. A piecc of the metal, with specimens of other Virginia minerals, is to sent to the World's Exhibition. The Barrondole plumbugo mine, England is the only one in that country, is exceedingly valueable, and as scrupulously guarded as if it were gold.

The Coal Trade for 1850.

The quantity of Coal sent to market thts week by Railroad is 47,313 02 tons. The whole quantity sent to market by this road for the year ending November 30, 1850, is 1,351,507 tons, against 1,097.761 19 tons for the previous year. Increase for 1850, 253,745,04 tons. The Coal was derived from tho following places:

Port Carbon,	468,554 10
Pottsville,	175,815 13
Schuykill Haven.	535,535 17
Port Clinton,	171,601 03
Total for the year,	1,351,507 03

The trade was interrupted some during the week at the Columbia bridge, and we also learn that the demand is slacking off a little at Richmond. We see no good reason for this, as the supply of coal in market is still about 150,000 tons short of the supply of last season without making allowance for increased consumption. It is hardly possible that stoppage of factories could effect the trade to so great an extent, when we know there has been an increased demand for the California trade and ocean steamers.

There is great rejoicing amongst those engaged as Collectors, Clerks, etc., connected with the different transporting companies and lateral roads, that the *active* coal season is about drawing to a close. They have nearly all been worked to death for the last two or three months—many of them remaining at their posts until two or three o'clock in the morning, and others in their offices night after night, until broad day-light.—*Miner's Journal.*

Receipts of Flour and Wheat.

Our weekly statement of the receipts of flour and wheat at tide water for the last eight days in November, or what is known in the canal department as the 4th week in November, and published yesterday, showed an aggregate receipt of flour and wheat greater than has ever before been received in any canal week during any previous season—overtopping the receipts for the 4th week in May, 1847, which, until the close of the 4th week of November, 1850, had furnished the largest receipts.—We give the receipts for the past two weeks:

	Flour, bbls.	Wheat, bush.	Equal to
1850, Nov...	301,500	490,215	399,543 bbls flour.
1847, May...	324,227	219,221	368,171 "
Excess.....			31,372 "

Showing an exces in the receipts of the fourth week in November, 1850, (which embraced a period of only eight days,) over the receipts of the 4th week in May, 1847, (which embraced a period of nine days,) equal to 31,372 barrels of flour.

There is another point in these receipts, showing the cappcity of the Erie Canal to pour in upon us an almost exhaustles flood of breadstuffs. We allude to the receipts of flour and wheat at tide water for the month of November, just passed, and compare them with the receipts for the month of June, 1847—the year of large receipts. Our readers can figure out for themselves what the quantity and price of flour at New York would have been, had the Erie Canal, without being taxed to its utmost capacity, emptied in upon us receipts of flour and wheat during the canal season, equal to what the following figures show it has done during the month just past:—

	Flour, bush.	Wheat, bush.	Equal to
1850, Nov.	921,410	1,315,907	1,184,591 bbls flour.
1847, June.	750,129	1,242,518	998,632 "
Excess.....			185,959

Showing an excess of 185,959 barrels of flour.

Large as this amount is, we have no doubt it will be wanted before the re-opening of the navigation on the canal—the complexion of the advices from England by several of the recent steamers holding out prospects of a large demand from that country, not only upon the surplus of Europe, but upon our Atlantic stocks.

Those who seem to be so much alarmed at the construction of railways—tapping, as it would seem, the business of our canal—have but to look at the figures given above. We think it will be many a long year before any railway now constructed will, with such other freight as would naturally offer in the course of an entire twelve-month, transport from one terminus thereof to the other, as much flour as the Erie canal has delivered at tide water during the month of November 1850.—*Albany Argus.*

The Railroad to San Francisco and Oregon.

H. V. Poor, Esq.,

Sir—The project for a railroad from the Atlantic States to the Pacific Sea, at San Francisco, will undoubtedly again be brought up at the present session of Congress, and a grant of public lands asked for in aid of it.

It is desirable that the numerous friends of the measure scattered over the country should give some consideration now to the best manner of carrying it out in practice. The general discussion thus far has impressed the country and Congress favorably towards this most important communication between the two seas, but both Congress and the people hesitate in regard to the modes which have been proposed to carry it into execution.

To satisfy the good sense of the country, as well as its pride, which is interested in the successful accomplishment of this bold project, should it be undertaken, the scheme must be clear in its plan, and fair and open in its operation. It must not be one-sided, or liable even to the suspicion of being created to enrich individuals, or to favor a merely speculative spirit.

There are three schemes prominently before the public, that of Senator Benton, that of Mr. P. P. F. Degrand of Boston, and that of Mr. Whitney.

Mr. Benton's scheme, if I rightly understand it, is founded on the application of the proceeds of all the public lands to the building of this road. But as there seems to be no disposition in Congress to favor it, and we must have a scheme which that body can unite upon as practicable, it is unnecessary to discuss his project now.

Mr. Whitney is looked upon as the father of the project, and as such many persons consider him entitled to a patent right to enrichment by it. This mode of looking at it, however, may be carried so far as to make Mr. Whitney appear *first*, and the project second; whereas, however meritorious Mr. Whitney's exertions may have been, or prophetic his perception, the railroad itself looms up as the great feat to be accomplished, and in its presence all subordinate agents must occupy a subdued position.

No man, from his peculiar relation to it, could have done more to bring it to a prompt and successful issue than Mr. Whitney, and it is by no means asserted that his private views may not be in accordance with a plain and business-like mode of carrying it out. But his scheme is not before the public in such a shape now as to command its entire confidence. It is not explained in such detail, in regard to the sale of the lands, the mode of application of the proceeds, the distribution of the stock and the construction of the road, as to enable men familiar with railroads to understand its entire operation. While, therefore, legislators have gone in favor of it, conveying thereby rather their approbation of the proposed road and the zeal of its author, than of this particular mode of accomplishing it, business men and railroad men have generally gone against it. To place such a scheme in the hands of one man is itself a dangerous and unnecessary experiment. It may be so modified as to take a more business like shape, and if Mr. Whitney's scheme is to pass during the present session, it is to be hoped that it will be made more explicit than as now presented.

Mr. Degrand has been so long practically conversant with railroads, as to entitle any suggestions from him on this subject to respect. The mode proposed by him would effect the end more easily and economically than any other method, because no *inducement* would be needed to procure the necessary capital, the United States guarantee being sufficient to command it. All other schemes must offer inducements commensurate with the supposed risk attending the investment, the absence of that local interest which secures to short railroads a large part of their capital, and the necessity of a speedy realization of the value of any lands at our disposal. All other schemes must therefore cost more in the first instance than this simplest scheme, in the ratio of the success which the *inducement*, or premium offered, or forced sale, is worth.

But Mr. Degrand's scheme is impracticable, because Congress could not be made to entertain it, and the feeling in Congress and out of doors is in favor rather of paying a bonus to a private company to effect the desired connection, than for the government to undertake it in a more direct way.

I propose to lay before you the heads of a scheme founded on the application of a certain amount of the public lands to the creation of capital for the construction of the road, and although it differs essentially from Senator Benton's scheme, and from Mr. Degrand's scheme, I hope that it will receive a fair consideration. It is offered only as a nucleus for discussion, and only because neither Mr. Benton's nor Mr. Degrand's schemes will be sustained, and Mr. Whitney's scheme leaves the public too much in the dark. The objects desirable at this moment are, to find a practicable scheme which shall unite the friends of the road, and to present the basis of a company which shall have the confidence of the public. If Mr. Degrand will take the matter in hand now, and in connection with the men of most experience in railroads in our most important cities, will prepare a measure to suit the circumstances, he will find a disposition existing in Congress to view it favorably; or if Mr. Whitney will take the same course, he might obtain what he has not now, the confidence and support of the railroad interests. Mr. Degrand, however, and the men with whom he has been associated, are more familiar with such matters than Mr. Whitney, and would be more likely from their long experience to give the design a working shape. Mr. Whitney might well be content to act with them, if the honor of being father to such a project should not be sufficient satisfaction to him.

The scheme which I propose to explain is founded on an issue of shares of one hundred dollars each, to the extent of capital sufficient for the perfect construction of a single track, and it offers as a bonus or premium to all subscribers to such stock an amount of land equivalent to the value of the stock, estimating the land at the prices explained in the table annexed. The subscriber for each share of $100, owns $100 in stock and $100 in land.

This bonus of land is not given because the stock is considered of doubtful value, but because the amount of money necessary to the rapid execution of the work, cannot be obtained promptly otherwise. I will not embarrass the subject now by discussing the business prospects of the road and its value as a safe investment.

SCHEME.

Distance from the western line of Missouri near Kansas, to San Francisco, 2000 miles.

Let there be appropriated a strip of land 28 miles wide on either side of the road, 25 miles of this being considered available in the calculation, and the remaining three miles worthless, or unavailable.—Let it be provided that should the road pass thro' some barren tracts of country, where the land may be of comparatively little value, the company shall receive other valuable lands in lieu of such tracts, that its good credit, on which rests the success of the enterprise, may always be maintained.

Let certificates be issued of the value each of $100, or multiples of $100, to the extent of $1000, and let each holder of such certificate, besides owning an amount of land equal to $100, be a stockholder to the same amount. Make the certificates transferable from hand to hand.

Let the land be estimated after a scheme which shall proportion the price to its proximity to the

railroad, and also to its distance from the termini of the road.

For the purpose of facilitating the dividing up and arranging of the lands, let a conventional centre line be determined so soon as a part of the route is located, which shall give averages through the curved parts of the road, and shall present a centre land line composed entirely of pieces of straight line, no unit or part of which shall be less than one mile long, nor less than some multiple of one mile.

The following table is based on a series of divisions of the tract longitudinally, each division having three sets of prices, applicable, the first to the land within one mile on either side of the road; the second to the land from one mile to ten miles on either side of the roadway; the third to all the land beyond ten miles on either side.

TABLE—Showing the amount and value of the lands referred to, at the prices designated, together with a general estimate of the supposed cost of the railroad for a single track.

Number of Divisions.	Length in miles.	Position longitudinally.	One mile on either side of the railroad. Price per acre.	One mile on either side of the railroad. Acres.	From one mile to ten miles on either side. Price per acre.	From one mile to ten miles on either side. Acres.	Beyond ten miles on either side. Price per acre.	Beyond ten miles on either side. Acres.	Value of the division.	Estimated cost of the Railroad. At per mile.	Estimated cost of the Railroad. Each division.
1	100	First 100 miles from Kansas	5.	128,000	2.50	1,152,000	1.50	1,920,000	$77,888,000	$39,000	$3,900,000
2	200	Next 200 miles.	4.	256,000	2.00	2,304,000	1.25	3,840,000	12,032,000	34,000	6,800,000
3	300	Next 300 miles.	3.	384,000	1.50	3,456,000	1.00	5,760,000	19,096,000	30,000	9,000,000
4	400	Next 400 miles.	2.	512,000	1.25	4,608,000	0.75	7,680,000	12,544,000	30,000	12,000,000
5	400	Next 400 miles.	2.	512,000	1.25	4,608,000	0.75	7,680,000	12,544,000	30,000	12,000,000
6	300	Next 300 miles.	2.	384,000	1.25	3,456,000	0.75	5,760,000	9,408,000	32,000	9,600,000
7	200	Next 200 miles.	3.	256,000	1.50	2,304,000	1.00	3,840,000	8,064,000	34,000	6,800,000
8	100	Next 100 miles.	5.	128,000	2.50	1,152,000	1.50	1,920,000	6,400,000	35,000	3,500,000
	2000								$77,888,000	$39,000	$59,100,000

The excess of $18,788,000 forms an allowance for making the land surveys, and for contingencies.

The machinery of the road is not intended to be provided for in this estimate. When a hundred miles of the road are completed, the company will find no difficulty in borrowing money on that portion to obtain the necessary machinery, and so of the rest; and that money can be liquidated in various ways as the interest of the stockholders may require. There seems to be no necessity for providing capital now for a branch of the outlay in regard to which funds will always be available while the road itself remains unincumbered.

So soon as a portion of the line of not less than a hundred miles was located, and the centre line defined, a land map of that portion would be prepared, and those holding stock would be at liberty to enter land thereon to the amount of said stock, but they could not receive a deed for such land until they were in possession of certificates of payments, and then only to the amount of such certificates. Copies of the land maps would be exhibited at New York, where would be the principal office, at Boston, Philadelphia, St. Louis, and such other cities as might be deemed advisable, entering at each city on specified days, and using the telegraph to communicate to the separate offices the entries made.

The certificates for stock and land would, as already said, be issued in forms to cover 100, 200, 300, 400, 500, 600, 700, 800, 900 and 1000 dollars.

Ten per cent. would be paid down at the time of subscription for stock, and this fund would be applied to the preliminary expenses of surveys and locations.

When this ten per cent. amounted to $100, as in the case of persons holding ten shares, (in value $1000), the payment would be met by a certificate for $100, which the stockholder would receive, and which would entitle him on its presentation to a title to land to that amount in the class which he had chosen, and it would entitle him also to a *stock* certificate which would only be issued when the "original" certificate had reverted to the company by the issue of the land title belonging to it. When a man held more than $1000 of stock. his instalments would always be made to cover one or more complete certificates, and when less, the same, except in the case of the first payment. The stockholder holding but one share would make but two payments, the first of ten per cent., and the second of ninety dollars, but this is a case which would occur but rarely in practice. Receipts for instalments would only be given in the case of the first instalment, and that only to persons holding nine shares or less, whose first instalment would not amount to one hundred dollars, the value of one certificate; in all other instances of the payments of instalments, the transaction would be closed between the stockholder and the executive of the company, by giving him certificates to the amount of his payment, and by graduating that payment for the several classes of stockholders, so that it would always represent whole hundreds.

It is necessary to enter thus into details, because the whole difficuly in regard to the organization of a company for the construction of this road is referable now mainly to details.

This system of certificates which I have endeavored to explain, besides that it simplifies the office business of the company, possesses other important advantages.

It furnishes the stockholder with a representative of current value, for each instalment paid in by him, and one which requires no reference to the books of the company, no transfer at the company's office to enable him to pass it from hand to hand. Although his name would be on the certificate it would be made available to the "bearer" of it, and the holder of it would at any time be entitled on presenting it, to a deed for the amount of land which it covered in such class and location as he might choose, and a new certificate then representing the stock simply, disconnected from the land. This stock when thus separated from the land would thereafter be available in the usual way. The first certificates would be called "*original* certificates for stock and land," the second "*stock* certificates." The two kinds of certificates would not interfere with each other. They would both be final, the one covering a certain amount of land and stock, the other a certain amount of the stock only.

A prominent advantage of these original certificates would be in the economy of capital. All descriptions of stock, available in the market operate in this way, but when the stock as in this case is put in a shape which admits of easy transfer from hand to hand, and easy verification without formalities or reference, the facility of its application in the current transactions of business, is very much increased. If the rapid settlement of the States and territories on the Pacific should give to the public, confidence in the profitableness of the road, and if the gradual settlement of the public lands on its route should further ratify this confidence, these certificates, (signed by the President and Secretary of the company, and for the land to which they are settled, countersigned by an officer of the government appointed for that purpose) would pass in the chief markets of the world as so much money, rising and falling in value no doubt, like other similar property, but possessing an intrinsic worth which would prevent, with prudent management, their ever being much depreciated.

One of the prominent difficulties of this road is the amount of capital required for its construction, a difficulty which has appeared to many to be all but insuperable; and one of the prominent objections to the road is, that supposing this amount of capital obtainable, its application to this road would be its withdrawal from other business, and to an extent which would be felt seriously by business men. But so long as the money invested in this way maintains a par value its amonnt can be made available by business men as easily as a bill of exchange for so much merchandise, can be cashed at a bank. The certificates being complete will form so many evidences, transferable like money bills from hand to hand. The amount of their depreciation would be so much capital sunk for the moment; but to the amount of their availibility they would not at all embarrass the person holding them, whether he were or were not a business man. Our object has been to make the investment so safe, and the original certificate, (besides being complete, and clear of partial payment), so valid on account of its double representation of stock and land, as to render these certificates a part of the current paper of the money market, and to leave free in consequence for commercial purposes, the capital which they will represent.

Although in the scheme here presented, certain prices have been affixed to the lands for the convenience of calculation, the amounts for one certificate, of the various classes of land, would differ a little from the quantities which those prices would give, the number of acres represented by one hundred dollars must conform to certain divisions of each square mile of land. The square mile contains 640 acres, and this number of acres must be divided into so many parcels of equal extent and form, otherwise the surveying and mapping of these lands would become complicated and expensive.—It is not necessary that the sizes of the sections should correspond with the system in use at the public land office. In this case it could not without sacrificing the scale of prices and the arrangements which we have in view. The arrangement,

however, may be simple, though for the different prices, the sections of land due to one hundred dollars will necessarily be different. Each one hundred dollar certificate would represent the following quantities of land, according to the class chosen by the holder:—

Value of land per acre. Dollars.	Acres to each certificate of $100.	No. of sections in each square mile.
5	20	32
4	24 6-10	26
3	32	20
2 50	40	16
2	49 1-4	13
1 50	66	10
1 25	80	8
1	100	6
0 75	133	5

I have not estimated for a double track though that will be wanted shortly after the completion of the road; for the reason that business which will render a double track necessary, will command the capital to construct it. A single track properly arranged, will accommodate an amount of business sufficient to make a good return on the investment, nor need the building a second track and the additional capital required then, reduce the profits of the orignal stockholders, for the second track will only be rendered necessary by an increased amount of transit on the first. My object has been to simplify as much as possible the industrial problem before us, and to complicate it with no provisions which are not absolutely necessary to its solution. The price per mile affixed to the estimates of the different diversions, is predicated on the character of the Missouri county as a type of what will occur on the plains and throughout the route, except at the mountain passes. It would be as unwise to affix an unreasonably high scheme as one too low. The broken and difficult character of the New England country, so far as we can judge here, gives an average cost inapplicable to the country through which this road will pass.

The scheme suggested here and modes proposed want to be discussed and sifted. The proposed road is not a wild vision of a speculative age and country as many imagine. The scheme when approached will be found to have roots which are being constantly nourished.

When some practicable mode of operation is settled upon, the next step will be to form the nucleus of a company and to prepare a memorial, ask for a fair hearing in Congress and for the passage of a bill in accordance with the case.

The subscription of one million of dollars and the payment into the hands of a responsible man of 10 per cent should constitute the company and entitle it to the action of any bill founded on these general principles.

The construction of the proposed road as it is located should be confided to responsible contractors who would undertake at least 100 miles of the road in one division, including the engineering, subject to specific plans, grades and curvatures, and whose progress would be superintended by competent engineers appointed by the company.

The road should start from St. Louis because St. Louis is the most prominent city of the extreme west, where shortly railroads from all sections of the country will converge. The length of road to be constructed is besides in this case reduced. The citizens of the State of Missouri will build their road to the western line of the State, 300 miles, leaving about 2,000 miles to be built by the overland company.

But if it is judged otherwise, and a bill should have favor commencing the road elsewhere, as proposed by Mr. Whitney, the citizens of Missouri will claim the privilege of making a branch into the main trunk and will ask for the same description of grant to that end, and the same privileges as the main trunk line, and will clearly show in proof of the propriety of such equal privileges being awarded them, that a larger circle of population will be accommodated than by the extreme northern route, a greater number of States and a much larger scope of industrial interests embracing essentially all those affected by the northern line. The Missouri line will approach the heart of the western valley and will come into closer proximity with the Southern States, while the northern route skirts the far west edges of the settlements covering a greater extent of lands presently available, at the expense of the general accommodation. The road which I have in view would immediately enter the unsettled Indian country, and would *commence* a long way in advance of the Lake Michigan route.

I will not pursue the subject further now. If a company could be formed I know of no men more fitted by their long familiarity with railroad operations to take the lead in it than Mr. Degrand, Mr. Hale, Mr. Derby and many others in Boston and other seaboard cities who have proved themselves working men in all railroad affairs.

For the sake of simplicity I have confined my calculations and remarks to the direct line to San Francisco, but the branch to Oregon would be embraced in the same general scheme and the same principles would be applicable to it.

There are many other points which have been avoided for the present for a similar reason.

Your ob't. serv't.,

A. SUBSCRIBER.

St. Louis, Mo., Dec. 1, 1850.

Indiana.

Richmond, Hagerstown, New Castle and Pendleton Railroad.—The board of directors of the New Castle and Richmond railroad, at their meeting on the 2d inst., completing their organization by electing Hon. J. T. Elliot, President; T. B. Woodward, Secretary; and Eli Murphey, Treasurer.—Mr. Erwin, of Hamilton, will probably be continued as principal engineer. The character of the board and officers are a sufficient guarantee wherever they are known, that the work will be pushed forward as rapidly as possible, and that the affairs of the company will be prudently managed. Mr. Erwin is now preparing the whole line for letting, and will have his report ready for the action of the board at their meeting on Monday week.—*New Castle Courier.*

Michigan.

Michigan Southern Railroad.—The earnings of Michigan Southern Railroad for November were $20,265. For the last four months the earnings compared with the same months in 1849 as follows:

	1849.	1850.
August	$10,379 03	$16,417 29
September	14,082 65	20,483 81
October	15,373 47	29,096 73
November	9,822 47	20,265 00
Total	$49,657 62	$85,262 83
		49,657 62
Increase equal to over 73 per cent		$36,605 21

In the six months ending 30th November the total earnings of the read were $102,979.99, while the expenses for operating, repairs, including taxes and rent, payable to the Erie and Kaalmazoo Road for the same period, were considerably under 50 per cent of the gross earnings. This enables the Company to pay a dividend of $4 per share for the current six months, beside reserving a very handsome surplus for the use of the Road.

Ohio and Pennsylvania Railroad.

The bids for the $500,000 mortgage bonds of this company were opened at the house of Winslow, Lanier & Co. on the 7th inst.

The following were the successful bids:

H. K. Craig	2,000	96
Meyer & Stucken	10,000	91 99
Poland, Jenkins, & Co	5,000	92
Adam Pierson	1,000	92
J. N. Perkins	5,000	92
J. N. Perkins	5,000	91 86
Jno. Ferguson	10,000	92
Jno. Ferguson	10,000	91 95
R. P. Van Zandt	5,000	91 85
Jno. Thompson	10,000	91 85
Jno. Thompson	10,000	91 65
Jno. Thompson	10,000	91 45
Jno. Thompson	10,000	91 35
C. S. Francis	10,000	91 65
J. N. Perkins	5,000	91 56
J. N. Perkins	5,000	91 50
J. N. Perkins	5,000	91 26
A. Colville	5,000	91 45
P. McMartin	5,000	91 26
DeLannay, Iselin & Clarke	40,000	91 26
DeLannay, Iselin & Clarke	60,000	91 23
Samuel Riggs	43,000	91 25
E. C. McIntosh	38,000	91 23
Morant Iselin	50,000	91 23
P. McMartin	15,000	91 20
J. F. Sanford	50,000	91 20
C. C. Alger	34,000	91 20
Ward & Co	25,000	91 16
E. S. Whelen & Co	7,000	91 15
Total	$500,000	

Of the $500,000 there were $434,000 taken at 91 20 and 91 85 inclusive. In addition to the above there were bids for $744,000.

The above may be considered as a very advantageous sale for the company, and has undoubtedly produced more than a private sale could have effected. It will have a very beneficial influence upon western credits, as it gives a standard by which similar securities will be measured. This is what they have wanted for a long time. Their value thus far has depended more upon accidental circumstances than upon the intrinsic worth or the condition of the money market. There is now a constant and regular upward tendency in these securities, and there is no reason why, in a very short time, they should not command as high a price as those issued by eastern companies.

One thing we will say, that New York has acted the handsome part in this matter. The above road was projected and is being built for the express purpose of giving to Pennsylvania and to Philadelphia the trade of a section of country now enjoyed by this city. Philadelphia claims that this road is going to give her the western trade, and that in respect to this, when the above road is completed, she is going to change places with New York. With this object in view, she comes into this city for the necessary means, and this project receives the universal commendation of our press, which has done all it could to secure this project the most favorable reception. There has not been a suggestion from any quarter that the above was a rival of our great lines of railroad, the success of which our people have so much at heart, and that it might take away a very large portion of our

trade. All this certainly proves that we are either very indifferent to our interests, or that we are very tolerant and liberal people. To some extent both of these conclusions are correct. Some of the above bids too were probably on foreign account, and capital from this sourse pays no attention to State boundaries. If other lines having a more intimate connection with this city are disposed to complain, they must make out as good a case as the above road has done, and they will fare equally well.

AMERICAN RAILROAD JOURNAL.

Saturday, December 14, 1850.

Qualifications for the Management of Railroads.

There have now been expended upon the railroads in the United States at least $300,000,000. This expenditure has been chiefly confined to the last 15 years, and by far the greater part since 1840. We are now expending some 20 to $30,000,000 annually upon these works, with every prospect that the amount will yearly increase.

The growth of the railway interest as a distinct department of industry is without parallel in the history of industrial pursuits. It has given to capital an importance never felt by it before. So rapid has been this progress, and so vast their demand upon the labor and capital of the country, as to allow but little time or attention to the economics of construction and management; the attention of all connected with them being constantly occupied in getting them in readiness for operation. The short time that has elapsed since their introduction has not been sufficient for experience to mature itself, even with those who enjoy the best opportunities for observation; and a large proportion of our engineers have no such opportunities, hurried as they are from one work to another. The demands of new works increase much faster than they can be met by engineers of experience. Their superintendence must, therefore, be entrusted to those who qualify themselves for their duties as they go along. We meet with the same difficulties to a still greater extent in the management of railroads, as a fitness for this position requires more skill and experience, a better education, and a higher capacity, than the ordinary work of construction. A man without science, or much education, may dig down a hill or fill up a ravine as cheaply as the most scientific, ordinary experience being all that is wanted in such a case as this. But in the running of an engine, the laying of a rail, or in the general superintendence of a track, ordinary experience furnishes no sure guide. Capacity here must be the result of experience in this *particular* thing; and as this task is vastly more complicated than the former, there are proportionally fewer than are fitted for success in it.

Now the amount of loss which is directly attributable to unfitness and inexperience on the part of those engaged in railroad construction and management, bears a very large proportion to the whole expense. Many persons who have enjoyed the best opportunities of estimating this loss place it as high as 25 or 30 per cent of the whole cost. If such is the fact, we are paying a frightful penalty for our ignorance and incapacity. But whether this loss is 10 or 33 per cent, the amount attributable to this cause is enormous, and is admittted by every company, as well as most every person employed, as one of the great drawbacks upon the profitableness of railroads, and as the great evil that needs reform.

It may be well to call attention here to the fact, that while the cost of many of the items of construction have been reduced from 50 to 100 per ct., the result of our increased experience, the cost of running roads regularly increases. This, though a very striking fact, is easily explained. The work of construction is generally committed to private enterprise, which is constantly stimulated to the devising of means, by which the cost of the work may be cheapened. Every experiment that promises an improvement upon the old mode is resorted to, and every improvemhnt is instantly brought into use. Every expense is curtailed to the utmost limit. Every economy is put in practice; and our mode of working *to-day* is the result of all that we have gained from past experience. Those employed here are urged forward by the double stimulus of self interest as well as of an inventive disposition. But when we come to the running of railroads everything is reversed. Here those employed have a regular salary, irrespective in a great measure of qualifications or amount of service performed. Their pay is fixed, and as they have no direct interest in the result of their labors, they have but little motive to economy or inducement to the exercise of the inventive facilities to reduce the expense, or increase the efficiency of the force employed. To men so selected, the *past* will be the standard of excellence. The *past* has given them their places, and if the future equals the past their obligations are discharged. We do not mean to assert the above as of universal application, only to state the natural *result* of the relation sustained by the employees on a railroad to the company. In every situation in life we find persons with whom money is regarded as the least valuable reward of labor, who dedicate themselves to their appropriate calling, and find all the reward they desire in the consciousness of having well done, whatever they have undertaken.

Now if companies continue to operate their roads on their own account, the great work of reform should begin by qualifying those employed, for their respective duties. But we labor under great disadvantages here, in the difficulty that exists of diffusing, and of making common stock the results of individual experience. We have roads that are well managed, and by persons who are capable of instructing others, and if the aggregate of experience or capacity which exists, could be made available by all, we should have but little to complain of. But there is among our engineers a great unwillingness to come before the public with any of the results of their own observation. One great reason of this unwillingness is to be found in their early education. A majority, perhaps, of our best engineers never acquired a facility of expressing their ideas in writing, nor enjoyed the training of an university when young. Now ease in writing can only come from habit, and a confidence in our ability to make use of proper terms and a correct style. An engineer, therefore, of undoubted capacity, and who can express his ideas with the utmost clearness in conversation, finds it quite a different matter when he sets himself down to write for the public press. The want of experience makes this so irksome a task that it is frequently neglected altogether, or if he can overcome this, he distrusts his style and mode of expression. So strong is this disinclination to write from these causes that it is a very rare thing to see an engineer in print, either under his own name or anonymously. In the intercommunication of ideas and experience, our engineers labor under a great disadvantage in the vast extent of our country. This allows only of limited intercourse. We need, too, some common point, where all the results of railroad experience can be collected. In England all charters proceed from the same authority. With us, each State has its own system. Returns of railroad companies, if made at all, are made to the State governments. These are not only very imperfect, but they must be sought for in every State in the Union, and it is a very difficult matter to collect and present them in one body. There is too, a certain amount of State pride which has an effect to isolate the engineers of one State or section upon those of another. All these are so many additional hindrancies to the free transmission of ideas, so essential to general improvement.

In New England, where all these difficulties are not felt to so great an extent, the superintendents of railroads have formed an association for mutual improvement, which meets monthly to discuss the various questions that arise in the discharge of their duties. This association is doubtless productive of great good to its members, but its usefulness is confined to them, as but few of the results of the deliberations are made public. We apprehend, however, that this association is much less useful, even to its members, than it might be made to be. To enable it to effect all that it is capable of accomplishing, such an association should be possessed of sufficient means to dispose of all questions that may arise in their appropriate manner. To do this may involve a very considerable expense in instituting the proper experiments or tests. It should possess abundant means for such experiments, to compensate those making them, and defray the expense of making them public. Such means, we presume, the New England association does not possess. Their conclusions must, therefore, be the result of conjecture, rather than demonstration. In this respect the English are greatly in advance of us. Their scientific organizations possess abundant means for carrying out the objects of their formation. With them no sooner does a fact arise, than they set to work to discover the theory, the *rationale* of it. They do not allow themselves to grope in the dark, or to remain subject to a blind caprice. With them fact and theory go hand in hand. The consequence is that every successive step is the natural sequence of the preceeding.—They leave no room for accidents. They will not hazard success by adopting what is *plausible*, so long as they can subject this plausibility to a test. They will use nothing that is not properly vouched. This is the secret of their steady and uniform success, not brilliant, but enduring. Now, as a nation, we are a much more inventive and skilful people. Our institutions, if nothing else, would render us so; and with the same means of progress, we should leave that nation behind in all the great industrial enterprises.

If in what we have said, we have described an existing state of things, the question arises how shall the correctives be applied. These must come from the action of the companies themselves. They must take some steps by which the experience and capacity of the few shall become the common stock of all, by which a skilful and experienced superintendent or engineer, or a well managed road, shall become an example for such as lack the proper qualifications. In this matter we should not look to the State, or general governments for aid. It would be bad policy for them to interfere, and if they should, they could do but little to secure the desired result. The proper course is for all the railroads of the country to form a general association for the mutual improvement of all persons in their employ. This association should have regular meetings, at some central point, at which the various subjects connected with railroad management shall be fully discussed, and addresses given by persons properly qualified to instruct. The transactions of these meetings should be regularly published for the benefit of those who might not be able to attend. To secure the funds necessary to carry out fully the object of this convention, each railroad should be made to contribute in proportion to its capital, which would be but a trifle to each company.

We believe we have indicated the only mode by which the evils to which we have alluded can be corrected. In adopting these suggestions, railroads would simply follow the almost universal precedents of other interests; sanctioned by common sense, as well as the test of experience. The reason why they have not been before followed is the recent date of railroads. But if such associations are important to minor interests, how much more important would they become to railroads, an interest paramount to all others.

We have thus stated the necessity, and indicated the steps essential to reform. The details we shall develope at another time.

Notice to Contractors.

COVINGTON AND LEXINGTON RAILROAD.—Sealed Proposals will be received at the office of the Covington and Lexington Railroad Company, in this city, until the seventh day of January next, for grading eighteen (18) miles of the Covington railroad, commencing at the proper end of section No. twenty, (20) near E. Clarkson,s house, and extending up the valley of the Licking river, and along the left or Western bank to the town of Falmouth, in Pendleton county. The proposals will include all the excavations and embankments, and the masonry for culverts; also the masonry for bridges.

Plans and specficiations of the work to be done and the terms of payment may be seen at the office of the Company, at any time between the twenty-seventh of December and the seventh of January.

SYLVESTER WELCH,
Engineer Covington and Lexington Railroad.

Office of the Covington and Lexington Railroad, Covington Ky., Nov. 25th, 1850.

Notice to Contractors.

ENGINEER'S OFFICE E. T. AND VA. R. R. Co.,
Jonesborough, Nov. 30th, 1850.

SEALED PROPOSALS for the graduation and masonry of forty miles of the East Tennessee and Virginia Railroad will be received at the Office of the Chief Engineer, Greenville, Greene County, E. Tenn., until the 15th day of January next.

A fine opportunity here presents itself to good contractors. Labor and supplies abundant and cheap, the country remarkably healthy, and every opportunity for the successful prosecution of the work.

This link of forty miles commences at McBee's Ferry, on Holston River, 15 miles east of Knoxville, and extends to Bull's Gap.

A fine variety of work will be offered, and experienced contractors would do well to give it their attention.

Specifications, maps, profiles, &c., &c., will be in readiness for the inspection of contractors by the 25th of December.

By order of the Board,
LLOYD TILGHMAN,
Chief Engineer.

Panama Railroad.

We learn that J. C. Trautwine, Esq., has resigned the post of engineer of this company at Panama, on account of illness; his health having given way to the pestiferous climate of the Isthmus.

How far all the efforts of the company must succumb to the same cause remains to be seen. But there seems to be great reason to fear that they in the end must yield to the same influence. The little progress made the past year, shows the great difficulty of executing works in that climate, and how little these difficulties were appreciated in the outset. The fact alone that in the United States a certain amount of work can be predicated upon a given sum of money, led people to suppose that it would accomplish the same result at Panama; forgetting that the two cases were entirely different; that at Panama the amount required to meet the demand of the *climate* alone, would be ample for the *completion* of a work in this country, similar to the one attempted there. It is impossible to conjecture what proportion of means will be absorbed by a climate which is so fatal to all unacclimated persons, and which renders the natives almost incapable of prolonged physical exertion. So formidable are these obstacles, that works of trifling magnitude elsewhere, may become impossible of execution here by private enterprise, which must be limited as to means, and which cannot *command* men except by money. We all know how a handful of blacks in St. Domingo, who, at the outset only inspired contempt, baffled all the efforts of France in the zenith of its greatness; and how a few Indians in Florida resisted for years all our efforts to subdue them. In both of these cases a nation's strength was put forth, and the causes that baffled all efforts were not the resistance of enemies, but the more powerful resistance of a pestiferous climate. To this we may attribute the want of success of this company, should their efforts prove a failure. Its means are vast, and will be likely to be expended without stint, and all arrangements for this work are on a most liberal scale.

But in the present case this company have great difficulties to encounter in addition to those we have enumerated. We all know how expensive and difficult all works become where the scene of operations is far removed from their base, where the direction and execution of affairs are widely separated. If we are rightly informed, this company propose to execute this work not in the ordinary and most approved way, by *contract*, [throwing the whole burden and responsibility upon contractors after the terms are agreed upon], but on their own account, they virtually becoming contractors. The advantages of the former mode of carrying on public works, is, that competition brings down the *price* to the lowest limit, and in the next place, a company summons to its aid a body of experienced and energetic men, who have as direct an interest as the company itself, in the economical and rapid progress of the work. These men stand between the company and the laborer, and see that every cent is properly expended, for upon an economical expenditure depends all their profits. All are thus made coadjutors to the same end; and all have a similar interest in success. The following of this course, sanctioned by experience as well as plain common sense, would to a certain extent have transferred the directorship from New York to Panama, where upon the spot it could meet the exigencies as they rise, could preserve order, and keep up the discipline and courage of the men, in fine, could meet all the emergencies in the face as they might develope themselves, instead of waiting for instructions from a distant source. We are afraid that the company have not counted the cost of abandoning a fixed rule of similar companies, vastly more important to be followed in this than in ordinary cases, from the almost impossibility of personal superintendence on the part of the directors. They cannot expect to be served with any more zeal than other companies; and when men receive a fixed salary for their term of service, all experience shows that their principal object of anxiety will be, to see how *little* labor they can perform for their pay. There are many exceptions undoubtedly to this rule among the agents of this company; but on the whole it will be much more certain to be pretty closely followed at Panama than in this county, from the pain which attends all physical effort there.

This company we presume have been very anxious to complete their road at an early day, before the rival projects at Tehuantepec and Nicaragua should come in competition with their more direct routes. These have such a striking advantage over the Panama route, in point of distance, that we do not see how they could fail to become the great points of transit when completed, leaving Panama deserted, as far as the Califorhia and Oregon travel is concerned. There is now an equal chance that the Nicaragua will be completed, as the Panama. The former we believe to be a much healthier route. It will vastly reduce the distance over that by Panama, and diminish the time necessary to make the voyage to California in still greater ratio. We shall in a very short time have a direct line of railroad to New Orleans. From New Orleans, the voyage across the gulf could be made in a time not much exceeding two days.—One day more would suffice to cross by railroad to the Pacific. To New Orleans the distance from this city will be performed easily in three days. Allowing three more for the distance from New Orleans to the mouth of Coatzacoalcos, and one for crossing the Isthmus at this place, it would take only one week's time to go from New York to the Pacific coast. To reach this point by the Panama route would require at least three weeks, by a far more dangerous route, and almost the whole of it by sea. If both of these routes are completed, there can be no *rivalry* between the two; certainly not for travel going north, nor, in our opinion, for that going south. The Tehuantepec route would be much the quickest, even for those wishing to go to the west coast of South America.

The above are grave objections against prosecuting the Panama route, even if all the difficulties to be ecountered were removed. But these must remain so long as the climate is unchanged. This route is proverbially unhealthy, and the vast sacrifice of life there, shows that its reputation it this respect is well founded. Most of those going out in the service of this company have little idea of what they will be called upon to endure. Those who may survive, we may soon expect to see re-

turn, and the reputation which their experience will give the country will render it very difficult to supply their places. We wish this company every success, as their object is a most laudable one; but we confess we cannot see much to encourage them in the prospect.

To Contractors.

SIXTEEN MILES of the Grading and a portion of the Masonry of the South Side Railroad, extending to a point opposite Farmville, will be let on the 17th of December next. The work is to be finished by the 1st of January, 1852.

Profiles, Plans and Specifications, will be ready for inspection at Petersburg by the 10th of December.

C. O. SANFORD,
Chief Engineer.

South Side Railroad Office, 20th December, 1850. 3t47

To Contractors.

SCIOTO AND HOCKING VALLEY RAILROAD. Sealed Proposals will be received at the Railroad Office in Portsmouth, Ohio, until the first day of January, A. D. 1851, for the Grading, Masonry and Bridging of 25 miles of the above road—20 miles extending from Portsmouth to the 20th mile Post, two miles east of Bloomfield, Scioto county, and five miles extending from Jackson, Jackson county, southerly to station number 2046.

The character of the work is such as is usually found in the State, consisting of about 30 sections of Grading, varying from five to eighty thousand cubic yards.

Plans and specifications will be ready for examination after the 15th day of December next, and the line ready for inspection after about the 20th of December.

Contractors proposing for the Bridging may bid according to plans furnished by the Engineer, or according to plans furnished by themselves.

By order of the Board of directors.

J. V. ROBINSON, President.
J. W. WEBB, Chief Engineer.

Scioto and Hocking Valley R. R. Office, Portsmouth, Nov. 19, 1850.

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THE Subscribers are manufacturing and prepared to furnish upon order all kinds of Scales, such as

Canal Weigh Lock Scales, from 100 to 400 tons capacity,
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Our long experience in the business, and the facilities we have for manufacturing, enables us to supply all orders promptly. Every article made of the best material and warranted.

REFERENCES:

J. W. Brooks, Supt. Michigan Centarl R.R., Mich.
Benj. Loder, Prest. N. Y. & Erie R. R., New York.
Charles Minot, Supt. do. do. do.
The Hon. Board of Canal Commissioners and Engineers of Erie Canal Enlargement.
E. F. Osborn, Supt. Mad River & Lake Erie R.R., O.
Sam'l Brown, Chief Clerk Freight Department New York & Erie R.R., New York.
John Wilkinson, Prest. Utica & Syracuse R.R., N.Y.
John B. Turner, Supt. Galena & Chicago R.R., Ill.
M. Sloat, Supt. N. Y. & Harlem R.R., N.Y.
Carlos Dutton, Supt. Roch. & Syracuse R.R., N.Y.
Henry Martin, Prest. Buffalo & Attica R.R., N.Y.
John Crockford, Agent Patterson & Hudson River R. R., New Jersey.
D. C. M'Callum, Supt. Bridges & Buildings N. Y. & Erie R.R., N.Y.
B. Higgins, formerly Supt. Mansfield & Sandusky City R.R., Ohio.
A. H. Barber, Agent Mansfield and Sandusky City R.R., Ohio.
Charles Butler, Prest. Board of Trustees Wabash & Erie Canal, Indiana.
Jesse L. Williams, Chief Engineer Wabash & Erie Canal, Indiana.

DURYEE, FORSYTH & CO.,
No. 15 Water St., Rochester, N.Y.
General Depot and Scale Warehouse,
No. 205 Pearl St., New York.

India-rubber Goods for Rail Road Purposes.

THE Goodyear Metallic India rubber Co., (F. M. Ray, Agent) No. 104 Broadway, New York, (1 door from Pine street) has on hand and offers for sale at the lowest prices, an extensive assortment of Rubber Goods suitable for Railroad Companies, such as Hose of all sizes, Fire Buckets, Water Pails, Steam Packing, Car Covers, Tarpaulins, Clothing of all kinds for brakemen, switchmen, etc. Belting, and many other articles—all manufactured from Goodyear's Metallic India-rubber, and warranted to give satisfaction.

India-rubber HOSE is in use upon many railroads, for Tanks and Water Stations. It requires no oiling, is unaffected by heat or cold, and is in every respect a most desirable article, and much superior to leather. All sizes, from 1 in. to 6 in., or larger if needed, made to order.

The reputation of India-rubber for steam packing is well established, and it is now almost universally preferred to any other kind of packing. It will stand a higher degree of heat and last longer than any other substance. An assortment of every thickness from 1-32d in. 1½ in. always on hand.

Every article sold by the Goodyear Metallic India-rubber Co. is warranted, and will be offered to railroad companies at the lowest factory prices.

The Goodyear Metallic India-rubber Co. is a connection of the New England Car Co., and in addition to its large stock of goods for railroad and other purposes, has on hand a large assortment of F. M. Ray's Patent India-rubber Car Springs, both bearing and buffer, of all sizes.

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The present part contains beautifully executed plans, elevations, sections, and details of the Cast Iron Girder Bridge on the South Eastern R.R., and the Timber Viaduct with Stone Piers and Abutments and laminating pine Arches 120 feet span on the Newcastle and Northshields R. R., accompanied by Articles on the construction of foundations, including Piling, Coffer-dams, Concrete, etc.

Published by George Duggan, 300 Broadway, New York, to whom all communcations should be addressed and subscriptions forwarded.

☞ Parties remitting Mr. Duggan $5, and the remainder $4 when they have been supplied with the first six parts of the "Theoretical and Practical Treatise on Bridge Building, etc.," shall receive it monthly as published. To those making Mr. Duggan a present remittance of $9, the work will be forwarded post free to any part of the United States.

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The present part contains beautifully executed plans, elevations, sections and details of the Timber Bridge —3 arches 150 feet span—over the Lackawaxen river, and Delaware and Hudson canal, on the line of the N. Y. and Erie R.R., and of an improved R.R. Suspension Bridge, invented and patented by Joseph C. Avery, of the C. C. and C. R.R., Cardington, Ohio, with Articles on the Application of Suspension Bridges to R.R. purposes, and explanatory of the engravings of the Timber Bridge across the Patapsco river, at Elysville, on the line of the Balt. and Ohio R.R.

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This is the best Guide Book for Travellers now in use. It is carefully revised and corrected monthly, and contains valuable tables giving information of Southern, Western and Eastern routes, not to be found in any other publication.

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☞ The most complete and accurate guide ever published.—[Scientific American.

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NOTICE

For Proposals for Railroad Iron, for the Alabama and Tennessee River Railroad,

TO BE MANUFACTURED FROM ALABAMA ORE.

THE Alabama and Tennessee River Railroad Co. invite proposals, until the 1st of January, 1851, for Iron Rails, to be made of Alabama Iron, for the Northern Division and part of the Southern Division of their road, embracing a distance of about 105 miles. The rails are to be of the H pattern, in lengths of 18 feet, and weighing 63 lbs. per lineal yard. They are to be delivered on the Coosa river, at a landing to be hereafter designated, between Kimulgee ferry and Fort Williams, commencing their delivery on the 1st of November, 1851, and continuing it at the rate of from 80 to 100 tons per week, until the whole quantity required (10,500 tons) shall have been delivered. They are to be inspected by Lewis Troost, Chief Engineer.

It is proper to state to iron masters and capitalists at a distance, that the country traversed by the Northern and part of the Southern divisions of the road abounds in excellent iron ore and bituminous coal, and possesses every advantage for the successful manufacture of iron, health, cheap labor and provisions.

Further information may be obtained by addressing the President of the Company at Selma, Ala.

By order of the Board of Directors.

J. W. LAPSLEY, President.

Boardman's Patent Improved Steam Boiler and Furnace.

THE Patentee is now prepared to sell single or territorial rights to the use of the above named improvement. Recent experiments have demonstrated that this form of Boiler effects a saving of one-half the fuel required to run the best Cylinder Boiler with return flues, and about 40 per cent. of the amount used by Locomotive Boilers. The heat is so thoroughly applied to the water that the temperature in the chimney is reduced below 140 deg. The smoke and combustible gases are consumed within the furnace. The refuse gas instantly extinguishes flame or sparks, so that all danger from sparks is avoided. This Boiler is very compact in form, occupying less space than any other of like power.

References—Thomas H. Faron, Chief Engineer U. S. Mail Steamer Arctic, N.Y.; Messrs Mott & Ayres, and Mr. D. F. Jaycox, Chelsea Iron Works, 26th street N.Y.; Messrs. Tugnot. Dally & Co., Franklin Forge, 1st avenue, N.Y.; Mr. John Mills, Machinist, 319 5th street, N.Y.; Mr W. C. Smith, St. Albans, Vermont; and Messrs. Goulding,

H. BOARDMAN, 128, Fulton-st. N. W.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply at the office of the Company,

No. 74 South 3d st., Philadelphia,

Or to the Agents,

CHOUTEAU, MERLE & SANFORD,
NO. 51 New st., New York.

September, 1850.

ENGINEERS.

Atkinson, T. C.,
Alexandria and Orange Railroad, Alexandria, Va.

Bancks, C. W.,
Civil Engineer, Vicksburg, Miss.

Buckland, George,
Troy and Greenbush Railroad.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W, H.,
Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Davidson, M. O.,
Eckhart Mines, Alleghany Co., Maryland.

Fisk, Charles B.,
Cumberland and Ohio Canal, Washington, D. C.

Felton, S. M.,
Fitchburgh Railroad, Boston, Mass.

Floyd-Jones, Charles,
South Oyster Bay, L. I.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Gilbert, Wm. B.,
Rutland and Burlington Railroad, Rutland, Vt.

Grant, James H.,
Nashville and Chattanooga R. R., Nashville, Tenn.

S. W. Hill,
Mining Engineer and Surveyor, Eagle River, Lake Superior.

Holcomb, F. P.
Southwestern Railroad, Macon, Ga.

Johnson, Edwin F.
New York and Boston Railroad, Middletown Ct.

Latrobe, B. H.,
Baltimore and Ohio Railroad, Baltimore, Md.

Miller, J. F.,
Worcester and Nashua Railroad, Worcester, Mass.

Morris, Elwood,
Schuylkill Navigation, Schuylkill Haven, Pa.

Morton, A. C.,
Atlantic and St. Lawrence Railroad, Portland, Me.

McRae, John,
South Carolina Railroad, Charleston, S. C.

Nott, Samuel,
Lawrence and Manchester Railroad, Boston,

Prichard, M. B.,
East Tennessee and Georgia R. R., Cleveland, Tenn.

Roebling, John A.,
Trenton, N. J.

W. Milnor Roberts,
Bellefontaine and Indiana Railroad, Marion, Ohio.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Schlatter, Charles L.,
Northern Railroad (Ogdensburg), Malone, N. Y.

Sours, Peter,
Rahway, New Jersey.

Stark, George.,
Bost., Con. and Mont. R. R., Meredith Bridge, N. H.

Steele, J. Dutton,
Pottstown, Pa.

Trautwine, John C.,
Panama Railroad—Address through office of Panama Railroad Co., 78 Broadway, N. Y.

Trimble, Isaac R.,
Philad., Wil. & Baltimore Railroad, Wilmington, Del.

Tinkham, A. W.,
United States Fort, Bucksport, Me.

Thomson, J. Edgar.,
Pennsylvania (Central) Railroad, Philadelphia.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

Whipple, S.,
Civil Engineer and Bridge Builder, Utica, N. Y.

Williams, E. P.,
Auburn and Schenectady Railroad, Auburn, N. Y.

Williams, Charles H.,
Milwaukie, Wisconsin.

HOTELS.

Exchange Hotel,
Adjoining Eastern Railroad Depot,
BUFFALO, N. Y.
BY.....FISK & SPERRY,
Late of Delevan House, Albany.

J. D. Abraham, *Architect,*
NO. 300 MAIN STREET,
BFFFALO, N. Y.

Fountain Hotel,
LIGHT STREET, BALTIMORE,
P. THURSTON.....Proprietor.

DUNLAP'S HOTEL,
On the European Plan,
NO. 136 FULTON STREET,
Between Broadway and Nassau St.,
NEW YORK.

MANSION,
Corner of Maine and Exchange Streets,
P. DORSHIMER. *BUFFALO.*

GUY'S
United States Hotel,
(Opposite Pratt street Railroad Depot,)
BALTIMORE.
JOHN GUY. *WILLIAM GUY.*

American Hotel,
Pratt street, opposite the Railroad Depot,
BALTIMORE.
HENRY M. SMITH.....Proprietor.
Late of the Exchange & St. Charles Hotels, Pittsburg.

Washington Hotel,
BY JOHN GILMAN,
$1 *Per Day.*
No. 206 Pratt street, (near the Depot,)
BALTIMORE.

Barnum's City Hotel,
MONUMENT SQUARE, BALTIMORE.
This Extensive Establishment, erected expressly for a Hotel, with every regard to comfort and convenience, is situated in the centre and most fashionable part of the city, and but a few minutes' walk from the Railroad Depots and Steamboat Landings.
The House has lately undergone a thorough repair, embracing many valuable improvements, and will accommodate 250 Guests. BARNUM & CO.

JONES' HOTEL,
NO. 152 CHESTNUT STREET,
PHILADELPHIA.
BARNES & WEST, ... Proprietors.

BUSINESS CARDS.

Lithography.
JOHN P. HALL & CO.,
161 Main st., Buffalo, (Commercial Advertiser Build.)
Are prepared to execute all kinds of Lithography in good stole and at reasonable rates. Particular attention wil be paid to Engraving Railroad Maps, Engineer's Plans and drafts, etc., and orders in this line are respectfully solicited.

Cumberland, (Md.,) Coals for Steaming, etc.
ORDERS RECEIVED FOR AND FILLED by J. COWLES, 27 Wall St., N. Y.

Cumberland Steam Coal,
FROM THE
FROSTBURG MINES, MD.
H. A. TUCKER,
Agent of Frostburg Coal Co.
No. 50 Wall Street, New York.

Henry I. Ibbotson,
IMPORTER of Sheffield and Birmingham Goods. Also, Agent for the Manufacture of Telegraph Wire. 218 PEARL ST., NEW YORK.

Charles T. Jackson, M. D.,
STATE ASSAYER, late Geologist to Maine, Rhode Island, New Hampshire, and the United States, offers his services to his friends and the public in making any Chemical, Mineralogical or Geological researches that may be required for the improvement of Agriculture and the Manufacturing Arts. Particular attention will be paid to the exploration of mines and to assaying of ores of the metals.
State Assayer's office, 31 Somerset st.
Boston Sept. 3, 1850.

STEEL AND FILES.
R. S. Stenton,
20 CLIFF STREET, NEW YORK,
AGENT FOR
J. & RILEY CARR,
BAILEY-LANE WORKS, SHEFFIELD,
Manufacturers of Cast, Shear, German, Blister, and
Spring Steel,
Of all descriptions, *Warranted* Good.
FILES.
Manufacturers of Machinists' Warranted Best Cast Steel *Files*, expressly for working upon Iron and Steel, made very heavy for recutting.
☞ A full Stock of *Steel* and *Files* at all times on hand. 6m4

Walter R. Johnson,
CIVIL AND MINING ENGINEER AND ATTORNEY for Patents. Office and Laboratory, F St., opposite the Patent office, Washington, D. C.

Dudley B. Fuller & Co.,
IRON COMMISSION MERCHANTS,
No. 139 GREENWICH STREET,
NEW YORK.

Manning & Lee,
GENERAL COMMISSION MERCHANTS,
NO. 51 EXCHANGE PLACE,
BALTIMORE.
Agents for Avalon Railroad Iron and Nail Works. Maryland Mining Company's Cumberland Coal 'CED —'Potomac' and other good brands of Pig Iron.

Samuel Kimber & Co.,
COMMISSION MERCHANTS
WILLOW ST. WHARVES, PHILADELPHIA.
AGENTS for the sale of Charcoal and Anthracite Pig Iron, Hammered Railroad Car and Locomotive Axles, Force Pumps of the most approved construction for Railroad Water Stations and Hydraulic Rams, etc., etc.
July, 27, 1849.

James Herron, *Civil Engineer,*
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.,
PATENTEE OF THE
HERRON RAILWAY TRACK.
Models of this Track, on the most improved plans, may be seen at the Engineer's office of the New York and Erie Railroad.

PLUSHES
FOR
Railway Cars & Omnibuses.
F. S. & S. A. MARTINE,
112 WILLIAM ST., NEAR JOHN.

ARE now receiving a large and complete assortment of Plain and Figured PLUSHES, of their own importation, which will be sold at the lowest market price, viz: Crimson, Maroon, Scarlet, Green, Blue, Purple, etc.

ALSO—CURLED HAIR, the best manufactured in market.

To Railroad Companies, Machinists, Car Manufacturers, etc., etc.
CHARLES T. GILBERT,
NO. 80 BROAD ST., NEW YORK,

IS prepared to contract for furnishing at manufacturer's prices—

Railroad iron,
Locomotive Engines,
Passenger and Freight Cars,
Car Wheels and Axles,
Chairs and Spikes.

Orders are invited; and all inquiries in relation to any of the above articles will receive immediate attention

Manufacture of Patent Wire ROPE AND CABLES,

For Inclined Planes, Suspension Bridges, Standing Rigging, Mines, Cranes, Derrick, Tillers, &c., by JOHN A. ROEBLING, Civil Engineer,
TRENTON, N. J.

FORGING.
Ranstead, Dearborn & Co.,
MANUFACTURERS OF
LOCOMOTIVE CRANKS AND CAR AXLES,
ALSO
WROUGHT IRON SHAFTING,
And All Kinds of Hammered Shapes.
Office 25 Foster's Wharf, Boston.

Samuel D. Willmott,
MERCHANT, AND MANUFACTURER OF
CAST STEEL WARRANTED SAWS,
—AND FILES—
IMPORTER OF THE
GENUINE WICKESRLY GRINDSTONES
NO. 8 LIBERTY STREET,
NEW YORK.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES, and Levels, with Fraunhoffers Munich Glasses, Surveyor's Compasses, Chains, Drawing Instruments, Barometers, etc., all of the best quality and workmanship, for sale at unusually low prices, by
E. & G. W. BLUNT,
No. 179 Water St., cor. Burling Slip.
New York, May 19, 1849.

IRON.

Iron.

Pig Iron, Anthracite and Charcoal; Boiler and Flue Iron, Spring and Blistered Steel, Nail Rods, Best Refined Bar Iron, Railroad Iron, Car Axles, Nails, Stove Castings, Cast Iron Pipes of all sizes, Railway Chairs of approved patterns' for sale by
COLEMAN, KELTON & CAMBELL,
109 N. Water St., Philadelphia.

Stickney & Beatty,
DEALERS IN IRON AND IRON MANUFACTURERS.

AGENTS for the Balt. City Rolling Mill, from which establishment they are prepared to furnish Ellicott's round, square, and flat bar iron, puddled and charcoal boiler plates and billet iron—also agents for the sale of the Laurel, Gunpowder and Locust Grove (Balt.) forge pig irons, Locust Grove and Laurel Irons for car wheels, Caledonian boiler blooms made from cold blast iron, Old Colony and anti-Eatam nails, Wm. Jessop & Son's steel, Coleman's blister steel and nail rods, sheet, hoop, band, oval and common English iron.

Nos. 18 and 20 South Charles st., Baltimore.

Car Wheel Iron.

100 Tons "Columbia" No. 2 Cold Blast Charcoal Iron.
300 Tons "Salisbury" No. 1, do. do.
For sale by CHARLES T. GILBERT,
No. 80 Broad st.
New York, Sept. 21, 1850.

Railroad Spikes.

THE subscribers are prepared to make and execute contracts for Railroad Spikes of a superior quality, manufactured by the New Jersey Iron Company, at Boonton. DUDLEY B. FULLER & CO.
139 Greenwich st. corner of Cedar.

Railroad Iron.

1650 Tons, weighing about 61 lbs. per yard, 40 tons, weighing about 52 lbs. per yard, and 825 tons, weighing about 53½ lbs. per yard, of the latest and most approved patterns of T rail, for sale by
BOORMAN, JOHNSTON & CO.,
119 Greenwich street.
New York, Aug. 26, 1850.

N.B.—B., J. & Co are also prepared to take contracts for English rails, delivered in any of the Atlantic ports of the United States.

Railroad Iron.

THE Undersigned, Agents for Manufacturers, are prepared to contract to deliver Rails of superior quality, and of any size or pattern, to any ports of discharge in the United States.
COLLINS, VOSE & CO.,
74 South St.
New York, June 1, 1850.

Railroad Iron.

1,500 Tons weighing 58 lbs. per lineal yard.
500 " " 57 " "
500 " " 56 " "
500 " " 60 & 61 lbs, "

Also 2½x½ flat rails. All the above being of approved patterns. For sale by
DAVIS, BROOKS, & CO.,
68 Broad street.

N.B.—Rails imported on commission, or at a fixed price.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc.. etc., etc.
T. & E. GEORGE.
Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the *very best* quality for special purposes, is respectfully invited. COOPER & HEWITT,
17 Burling Slip, New York.
February 15, 1850.

Railroad Iron.

THE Undersigned, Agents for Manufacturers, are prepared to contract for the delivery of English, Welsh and Scotch Rails, of any pattern and weight, also for every description of English, Welsh, Scotch, and Swedish Iron, Railway Chairs and Spikes, Rivets, Bolts, Nuts, Washers, Chain Cables, Anchors, Tin Plates, German Spelter, Iron Castings, and every description of Machinery.
WILLIAM BIRD & CO.,
Iron and Tin Plate Merchants,
44 Wall st., New York.
And at 5 Martin's Lane, City, London.
and 140 Buchanan st., Glasgow.
July 27th, 1850.

Glendon Refined Iron.

Round Iron, Band Iron, Hoop Iron,
Square " Flat " Scroll "
Axles, Locomotive Tyres,
Manufactured at the Glendon Mills, East Boston, for sale by GEORGE GARDNER & CO.,
5 Liberty Square, Boston, Mass.
Sept. 15, 1849. 3m37

PATENT HAMMERED RAILROAD, SHIP & BOAT SPIKES.—The Albany Iron Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes from 2 to 12 inches in length, and of any form of head From the excellence of the material always used in their manufacture, and their very general use for rail roads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscribers at the works will be promptly executed.
JOHN F. WINSLOW, *Agent.*
Albany Iron and Nail Works, Troy, N. Y.
The above Spikes may be had at factory prices, o Erastus Corning & Co Albany; Merritt & Co., New York; E. Pratt & Brother, Baltimore, Md.

LAP—WELDED
WROUGHT IRON TUBES
FOR
TUBULAR BOILERS,
FROM ONE AND A QUARTER TO SEVEN INCHES IN DIAMETER.

THE ONLY Tubes of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.
THOMAS PROSSER & SON, Patentees,
28 Platt street, New York.

Railroad Iron.

THE UNDERSIGNED ARE PREPARED TO contract for the delivery of English Railroad Iron of favorite brands, during the Spring. They also receive orders for the importation of Pig, Bar, Sheet, etc. Iron. THOMAS B. SANDS & CO.,
73 New street,
February 3, 1849. New York.

Iron Store.

THE Subscribers, having the selling agency of the following named Rolling Mills, viz: Norristown, Rough and Ready, Kensington, Triadelphia, Pottsgrove and Thorndale, can supply Railroad Companies, Merchants and others, at the wholesale mill prices for bars of all sizes, sheets cut to order as large as 58 in. diameter; Railroad Iron, domestic and foreign; Locomotive tire welded to given size; Chairs and Spikes; Iron for shafting, locomotive and general machinery purposes; Cast, Shear, Blister and Spring Steel; Boiler rivets; Copper; Pig iron, etc., etc.
MORRIS, JONES & CO.,
Iron Merchants,
Schuylkill 7th and Market Sts., Philadelphia.
August 16, 1849. 1y33

Railroad Iron.

THE MOUNT SAVAGE IRON WORKS, Alleghany county, Maryland, having recently passed into the hands of new proprietors, are now prepared, with increased facilities, to execute orders for any of the various patterns of Railroad Iron. Communications addressed to either of the subscribers will have prompt attention. J. F. WINSLOW, *President*
Troy, N.Y.
ERASTUS CORNING, Albany
WARREN DELANO, Jr., N.Y
JOHN M. FORBES, Boston.
ENOCH PRATT, Baltimore, Md
November 6, 1848.

Railroad Iron.

THE SUBSCRIBERS ARE PREPARED TO take orders for Railroad Iron to be made at their Phœnix Iron Works, situated on the Schuylkill River, near this city, and at their Safe Harbor Iron Works, situated in Lancaster County, on the Susquehannah river; which two establishments are now turning out upwards of 1800 tons of finished rails per month.

Companies desirous of contracting will be promptly supplied with rails of any required pattern, and of the very best quality.
REEVES, BUCK & CO.
45 North Water St. Philadelphia.
March 15, 1849.

Tredegar Iron Works.

ROLLING MILL FOUNDRY AND MACHINE SHOPS. The undersigned continues to manufacture at his Works in this city (from best charcoal metal) Bar Iron of every description, embracing—Rounds and Squares, from ¼ to 5 inches diameter. Flats, from 1 to 7 inches, all thicknesses. Bands and Scrolls, all sizes. Boiler plate and Plough Iron. Railroad and Locomotive Axles and Tires. Locomotive Frames, Spikes and Plates. Hoops, Ovals, Half Ovals, Half Rounds, Angle, T, L, and indeed every description of Iron usually manufactured, all of which he warrants to be equal to any made in this country. He also manufactures at his Foundry and Machine Shops all descriptions of Railroad Work, say, Locomotives, Railroad Wheels and Axles complete and ready for the road, Railroad Chairs, etc. Also, Marine and Stationary Engines all sizes, Sugar mills and Engines, Horse mills, and every kind of Machinery usually required for the operations of the country. He has paid particular attention to getting up machinery, etc., for Gold Mine operations, and those in want of such work might find it to their advantage to give him a call. J. R. ANDERSON.

Richmond, Va., Sept. 10, 1850.

CUT NAILS OF BEST QUALITY, BAR IRON (including Flat Rails) manufactured and for sale by FISHER, MORGAN & CO.,
75 N. Water St., Philadelphia.

Wheel, Forge and Foundry Iron.

LOCUST GROVE Wheel Iron of great strength and superior chilling property.

Balt. Charcoal Forge Iron, from Patuxent, Curtis Creek and Gunpowder furnaces.

Elkridge Foundry Iron, of superior strength and softness. Anthracite and Charcoal Iron from Pennsylvania and Virginia. Gas and Water Pipes, Lamp Posts from Elkridge furnace.

LEMMON & GLENN,
3m9 62 Buchanan's Wharf, Baltimore.

S. S. Keyser & Co., IRON WAREHOUSE,

Corner of South and Pratt Streets,
BALTIMORE, MD.

Selling Agents for the Rough and Ready Bar Iron and Elk Boiler and Flue Iron Rolling Mills, Sarah and Taylor Furnaces, and Wrightsville Hollow Ware Foundry, and Dealers in Bar and Sheet Iron, and Cast, Sheer, German, Blister, Spring and Electerised Steel, etc., etc.

Smith & Tyson,

GENERAL COMMISSION MERCHANTS,
No. 25 South Charles St., Baltimore, Md.

AGENTS for the Celebrated Columbia Pig Iron, suitable for Car Wheels and Chilled Rolls.

Columbia refined Charcoal Blooms; Refined Charcoal Juniatta Billet Iron for Wire; Refined Iron for Bridging, of great strength; Cut Nails, Spikes, and Brads; Railroad Spikes and Wrought Chairs. 22tf

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Railroad Iron.

CONTRACTS made by the subscribers, agents for the manufacturers, for the delivery of Railway Iron, at any port in the United States, at fixed prices, and of quality tried and approved for many years, on he oldest railways in this country.

RAYMOND & FULLERTON, 45 Cliff st.

JOHNSON, CAMMELL & Co's Celebrated Cast Steel,

AND

ENGINEERING AND MACHINE FILES,

which for quality and adaptation to mechanical uses, have been proved superior to any in the United States. Every description of square, octagon, flat and round cast steel, sheet, shovel and railway spring steel, best double and single shear steel, German steel, flat and square, goat stamps, etc. Saw and file steel, and steel to order for any purposes, manufactured at their Cyclops Steel Works Sheffield.

JOHNSON, CAMMELL & CO.,
100 William St., New York.

November 23 1849.

Bowling Tire Bars.

40	Best Flange Bars	5½x2 inches,	11 feet long.
40	"	5½x2 "	7 feet 8 in. long.
40	" Flat "	6x2 "	11 feet long.
40	"	6x2 "	7 feet 8 in. long.

Now in store and for sale by
RAYMOND & FULLERTON,
45 Cliff street.

IRONDALE PIG METAL, MANUFACTURED and for sale by the Bloomsburg Railroad Iron Co.
LINDLEY FISHER, Treasurer.
75 N. Water St., Philadelphia.

Railroad Iron.

2000 Tons, weighing 58 pounds per lineal yard, of the most approved pattern of T rails, in store and to arrive, for sale by
COLLINS, VOSE & CO.,
74 South St.

New York, June 1, 1850.

Railroad Iron.

3,000 TONS C. L. MAKE 63½ lbs. per yard, now landing and to arrive.

Also contracts made for future delivery of above superior make English Iron.

300 Tons Banks Best Iron, Round, Square and Flat.
200 " English Bar " " " "
10 " 9-16 Square Iron for Railroad Spikes.

For sale in lots to suit purchasers by
DAVID W. WETMORE.

New York, March 26, 1850. 3m

WILLIAM JESSOP & SONS' CELEBRATED CAST-STEEL.

The subscribers have on hand, and are constantly receiving from their manufactory,
PARK WORKS, SHEFFIELD,

Double Refined Cast Steel—square, flat and octagon.
Best warranted Cast Steel—square, flat and octagon.
Best double and single Shear Steel—warranted.
Machinery Steel—round.
Best and 2d gy. Sheet Steel—for saws and other purposes.
German Steel—flat and square, "W. I. & S." "Eagle" and "Goat" stamps.
Genuine "Sykes," L Blister Steel.
Best English Blister Steel, etc., etc., etc.

All of which are offered for sale on the most favorable terms by WM. JESSOP & SONS,
91 John street, New York.

Also by their Agents—
Curtus & Hand, 47 Commerce street, Philadelphia.
Alex'r Fullerton & Co., 119 Milk street, Boston.
Stickney & Beatty, South Charles street, Baltimore.
May 6, 1848.

Railroad Iron.

B. O. Railway Tires, Railway Wheels,
Scotch Pig Iron, Tin Plates and Banca Tin,
Muntzs Patent Metal Sheathing,
Baltimore Copper.

Contracts for Rails made on behalf of the manufacturers, for delivery at any ports in the United States, at fixed prices.

Bowling Tires and Tire Bars and Scotch Pigs imported to order.

Muntz's Ship-sheathing, and a general stock of Tin Plates and Banca Tin in store, and for sale by
RAYMOND & FULLERTON, 45 Cliff st.

Bowling Iron. Stamped B.O.

Railway Tire Bars	Rivet Iron
Locomotive and other Axles	Locomotive Frame do Bars.
Boiler Plates	

and every other description of this superior Iron.

The subscribers, agents for the sale of Bowling Iron, are prepared to execute orders for importation, especially for railway and machinery uses, with despatch from the manufacturers.

RAYMOND & FULLERTON, 45 Cliff st.

Lovegrove's Patent Cast Iron Water and Gas Pipes.

THE Subscriber, the Inventor and Patentee of the Centrifugal mode of giving form to metallic substances while in a molten state, is preparing to make Cast Iron Water and Gas Pipes, of any dimensions, at prices much lower than they can be made in the old manner, and the pipes warranted to stand a pressure of three hundred pounds to the square inch, and to be soft enough to drill. Steam Engines and all kinds of machinery. Cast Iron Doors and Frames, and Mill Castings of every description, made to order.

THOMAS J. LOVEGROVE,
Machinist and Founder,
West Falls Avenue, below Pratt st., Baltimore.

Railroad Iron.

SPIKES,
Wrought Iron CHAIRS, New Pattern.

THE Undersigned continues to contract, as usual, for the above articles. The reputation already acquired for their excellent quality is a guarantee that strict attention shall continue to be paid to the wants and interests of purchasers.

CHARLES ILLIUS,
20 Beaver St., New York.

Ray's Patent India Rubber Car Springs.

Savannah, Ga., May 22, 1850.

FOWLER M. RAY, Esq.,

Dear Sir: I have no hesitation in saying, after having used on our road your springs and Fuller's, that I consider yours decidedly the best in every particular, and in this opinion I am sustained by all our officers. Fuller's spring has a tendency to split, and also to chafe or abrade by the constant friction on the cast iron plates or disc: and in my opinion is not near so elastic as yours.

Your springs, which have been in use on our road for 12 or 15 months past, and in constant use under both passenger and freight cars, are to all appearances as elastic, sound and good, as when first put in use.

We are now building eigty-five new cars, of which for fifty-sets the springs have been ordered of you.

GEORGE A. ADAMS,
Master Carpenter,
Central Railroad and Banking Co. of Georgia.

—

Connecticut River Railroad Office,
Northampton, May 4, 1850.

E. CRANE, Esq.,

Dear Sir: It is now about two years since I first tried the experiment of using a set of Ray's India-rubber Springs upon one of our merchandise cars, and although the car has been in constant service since that time, I do not on examination find the slightest difference either in the thickness or elasticity of the material.

The same result has followed wherever we have applied them, either for wheel or draw springs on Engines, Tenders or Cars. At present we use no other; either in replacing old springs or building new cars—and I am perfectly satisfied that for economy, durability, safety, and ease of motion, that Ray's India-rubber is the best article for Springs which has been presented to the public.

Yours respectfully, J. HUNT,
Supt. Connecticut River Railroad.

—

EDWARD CRANE, Esq.,

Dear Sir: Having applied to cars of the Boston and Worcester Railroad Corporation, Ray's Vulcanised Rubber Springs (where they have been in use for some two years last past), I have had occasion to observe their operation, and am free to say in answer to your inquiries, that they retain their *elasticity* perfectly during all changes of atmospheric temperature: and are in my opinion a most valuable acquisition to Railroad Cars—are not liable to derangement, as is the case with steel springs; while at the same time it costs less to apply them. Respectfully yours,

D. N. PICKERING,
Supt. Motive Power, Bost. & Wor. Railroad.
Boston, April 15th, 1850.

EMERSON'S

PATENT

CORRESPONDING VENTILATORS,

For Ships, Steamers, etc.,

Manufactured by

CHILSON, ALLEN, WALKER & CO.,
351 Broadway, New York.

TO RAILROAD COMPANIES, CAR MANUFACTURERS, etc.

THE Undersigned hereby gives public notice, that the Commissioner of Patents, pursuant to his decision in relation thereto, on the 8th day of October, 1850, issued to him a Patent for the sole right to manufacture, and exclusive use of the INDIA RUBBER CAR SPRING, on account of priority of invention of said Spring. F. M. RAY.

New York, Oct. 23, 1850.

RAILROAD CAR MANUFACTORY

TRACY & FALES,
GROVE WORKS, HARTFORD, CONN.
Passage, Freight and all descriptions of
RAILROAD CARS,
AS WELL AS
LOCOMOTIVE TENDERS,
Made to order promptly.

The above is the Largest Car Factory in the Union. In quality of Material, and in Workmanship, Beauty and Good Taste, as well as Strength and Durability, we are determined our work shall be unsurpassed.

JOHN R. TRACY. THOS. J. FALES.

MACHINERY.

Henry Burden's Patent Revolving Shingling Machine.

THE Subscriber having recently purchased the right of this machine for the United States, now offers to make transfers of the right to run said machine, or sell to those who may be desirous to purchase the right for one or more of the States.

This machine is now in successful operation in ten or twelve iron works in and about the vicinity of Pittsburgh, also at Phœnixville and Reading, Pa., Covington Iron Works, Md., Troy Rolling Mills, and Troy Iron and Nail Factory, Troy, N. Y., where it has give universal satisfaction.

Its advantages over the ordinary Forge Hammer are numerous: considerable saving in first cost; saving in power; the entire saving of shingler's, or hammerman's wages, as no attendance whatever is necessary, it being entirely self-acting; saving in time from the quantity of work done, as one machine is capable of working the iron from sixty puddling furnaces; saving of waste, as nothing but the scoria is thrown off, and that most effectually; saving of staffs, as none are used or required. The time required to furnish a bloom being only about six seconds, the scoria has no time to set, consequently is got rid of much easier than when allowed to congeal as under the hammer. The iron being discharged from the machine so hot, rolls better and is much easier on the rollers and machinery. The bars roll sounder, and are much better finished. The subscriber feels confident that persons who will examine for themselves the machinery in operation, will find it possesses more advantages than have been enumerated. For further particulars address the subscriber at Troy, N. Y. P. A. BURDEN.

Railroad Spikes and Wrought Iron Fastenings.

THE TROY IRON AND NAIL FACTORY, exclusive owner of all Henry Burden's Patented Machinery *for making Spikes*, have facilities for manufacturing large quantities upon short notice, and of a quality unsurpassed.

Wrought Iron Chairs, Clamps, Keys and Bolts for Railroad fastenings, also made to order. A full assortment of Ship and Boat Spikes always on hand.

All orders addressed to the Agent at the Factory will receive immediate attention.

P. A. BURDEN, *Agent*,
Troy Iron and Nail Factory, Troy, N. Y.

CHILLED RAILROAD WHEELS.—THE UNdersigned are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of spokes or discs, by a new process which prevents all strain on the metal, such as is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,
Willow St., below 13th,
Philadelphia, Pa.

Brown's Old Established SCALE WARE HOUSE,

NO. 234 WATER ST., NEW YORK.

THE Subscriber, Practical Manufacturer of Scales of every description, respectfully asks the attention of Railroad Companies to his Improved Wrought Iron Railroad Track and Depot Scales which for strength, durability, accuracy, convenience in weighing, and beauty of workmanship, are not surpassed by any others in this country.

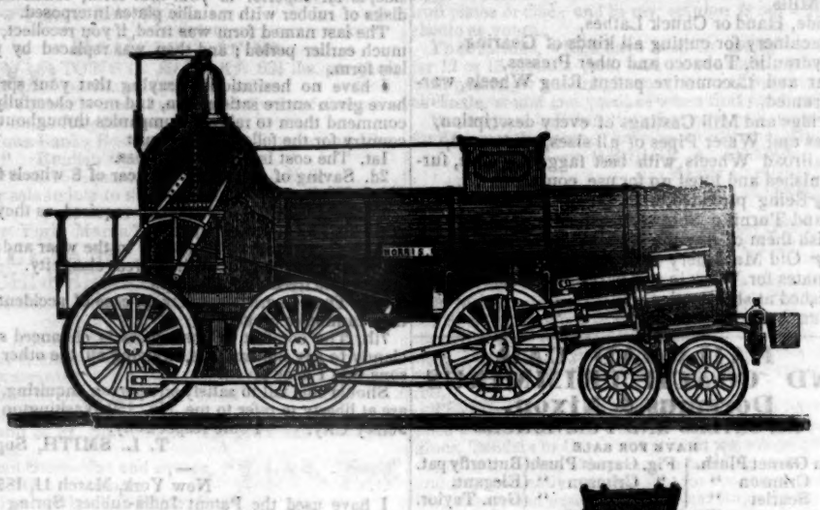
He is aware that this is rather a bold assertion for him to make, yet he can say with confidence that they have but to be tried to give them precedence over all others. J. L. BROWN.

☞ Bank Scales made to order, and all Scales of his make Warranted in every particular.

References given if required

NORRIS' LOCOMOTIVE WORKS.

BUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA,



THE UNDERSIGNED Manufacture to order Locomotive Steam Engines of any plan or size.

Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

Wrought Iron Tyres made of any required size—the exact diameter of the Wheel Centre, being given, the Tires are made to fit on same without the necessity of turning out inside.

Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS, BROTHERS

PATENT MACHINE MADE HORSE-SHOES.

The Troy Iron and Nail Factory have always on hand a general assortment of Horse Shoes, made from Refined American Iron.

Four sizes being made, it will be well for those ordering to remember that the size of the shoe increases as the numbers—No. 1 being the smallest.

P. A. BURDEN, *Agent*,
Troy Iron and Nail Factory, Troy, N. Y.

Etna Safety Fuse.

THIS superior article for igniting the charge in wet or dry blasting, made with DUPONT'S best powder, is kept for sale at the office and depot of

REYNOLDS & BROTHER,

☞ *So.e Manufacturers,* ☜

No. 85 Liberty St.
NEW YORK.

And in the principal cities and towns in the U. States.

☞ The Premium of the AMERICAN INSTITUTE was awarded to the *Etna Safety Fuse* at the late Fair held in this city.

November 3, 1849. 1y

COLUMBUS, OHIO,

Railroad Car Manufactory. RIDGWAYS & KIMBALL,

HAVE established at this central point, the manufacture of Passenger, Freight, Gravel and Hand Cars for Railroads, and assure all Western Railroad Companies that it will be their constant aim to procure the best materials and workmen, and to turn out the best kind of work at fair prices. Specimens may be seen on the Columbus and Xenia Railroad. The patronage of Railroad Companies is respectfully solicited. 1y8

FOR SALE.

THREE LOCOMOTIVES, Manufactured by M. W. Baldwin, of 10 tons weight, all in complete repair, and now running on the Columbia and Philadelphia Railroad.

For particulars apply to A. L. Roumfort, Supt. of said road, either at Philadelphia, or Parkersburg, Chester county.

A. L. ROUMFORT,
Supt. Motive Power Col. & Philad. R.R.

MR. HALE:—"The New England Car Co., having been engaged for the last six months in introducing the Vulcanized India-rubber Car Spaings upon the different railroads in this and other states, and having in particular introduced it upon the Boston and Worcester railroad with perfect success, were much gratified to find, by your paper of this morning, that the article had given satisfaction to the president of that corporation, and the terms of just commendation in which you were pleased to speak of it. But their gratification was scarcely equalled by their surprise, when, or arriving at the close of your paragraph, they found the results of all their labors attributed to a foreign source, with which the New England Car Co. has no connection. The material used on the Boston and Worcester railroad, and all the other railroads in this country, where any preparation of India-rubber has been successfully applied, is entirely an American invention, patented in the year 1844 to Charles Goodyear, of New Haven, Conn., and the application of it to this purpose and the form in which it is applied are the invention of F. M. Ray of New York. The only material now in use, and so far as has yet appeared, the only preparation of India rubber capable of answering the purpose, has been furnished under these patents by the New England Car Company, manufactured under the immediate inspection of their own agent. If any other should be produced, the right to use it would depend upon the question of its interference with Mr. Goodyear's patent. The New England Car Company have their place of business in this city at No. 99 State street, and are prepared to answer all orders for the Vulcanised India rubber Car Springs, of the same quality and of the same manufacture as those which they have already placed on your road, and most fo the other roads terminating in this city."

And yet Mr. Knevitt is using these experiments made upon the Springs of the Car Company to induce the public to purchase his springs, and is attempting to impose upon them the belief that the springs used were furnished by him! We ask whether such a course is honorable, or entitles his statements to much consideration from the public.

The above Springs are for sale 98 Broadway, New York, and 99 State street, Boston.

EDWARD CRANE Agent, Boston.
F. M. RAY, Agent, New York.

Boston, May 8, 1849.

STABILITY—SECURITY—PERPETUITY.

Mutual Life Insurance Co. of New York.

No. 35 WALL STREET.

A MILLION OF DOLLARS

Securely invested in Bonds and Mortgages on real estate in this city and Brooklyn, and stocks of the State and City of New York and United States Government.

The company declared a dividend of profits of fifty-two per cent. on all existing policies on the 31st of January, 1848.

All the Profits are Divided Among the Insured.

Persons may effect insurance on their own lives and the lives of others.

A married woman can insure the life of her husband, the benefits of which are secured by law for the exclusive use of herself or children.

Clergymen and all others dependent upon salaries or their daily earnings are specially invited to avail themselves of a resource whereby their surviving families may be secured from the evils of penury.

Pamphlets explanatory of the principles of Mutual Life Insurance, and illustrating its advantages, with forms of application, may be obtained at the office of the company, 35 Wall street, or of any of its agents.

TRUSTEES.

Jos. B. Collins,	Abraham Bininger,
Wm. J. Hyslop.	Alfred Edwards,
R. H. McCurdy,	Wm. Betts,
Fred. S. Winston,	Joseph Blunt,
C. W. Faber,	Isaac G. Pearson,
John P. Yelverton,	Henry Wells,
Theo. Sedgwick,	Wm. Moore,
Stacy B. Collins,	George R. Clark,
John H. Swift,	Jona. Miller,
John Wadsworth,	David A. Comstock,
S. M. Cornell,	Robert Schuyler,
Gouv. M. Wilkins,	James Chambers,
John V. L. Pruyn,	Joseph Tuckerman,
Jas. S. Wadsworth,	Moses H. Grinnell,
Charles Ely,	Wm. J. Banker,
John C. Cruger,	John M. Stuart,
Charles King,	Francis S. Lathrop,
Alfred Pell,	Nathaniel Hayden.

JOSEPH. B. COLLINS, President.
ISAAC ABBATT, Secretary. 3m9

Engine and Car Works,

PORTLAND, MAINE.

THE PORTLAND COMPANY, incorporated August 8th, 1846, with a capital of $250,000, have erected their extensive Works upon the deep water of Portland Harbor, and receive and transport, to and from their works direct, to and from vessels of any class.

They now manufacture to order, and deliver upon the Railroads running in each direction from the city, or on shipboard as wanted, Locomotive, Stationary, or Steam Boat Engines; Passenger, Mail, Freight, Earth and Hand Cars; Railway Frogs, Switches, Chairs and Castings; and every other description of Machinery.

HORACE FELTON,
Superintendent.

JAMES C. CHURCHILL,
General Agent and Clerk.

Rosendale Cement.

THE NEWARK AND ROSENDALE LIME AND CEMENT CO. are now manufacturing at their works in NEWARK, N. J., and Ulster county, N.Y., a very superior article of *Hydraulic Cement*—also Lime Calcine Plaster, etc. Contractors and dealers will find it to their advantage to call or make application before purchasing elsewhere. All communications addressed to the subscriber, at Newark, N.J., will be punctually attended to.

1y*15 HENRY WILDE, Secretary.

RAILROADS.

BOSTON AND MAINE RAILROAD.

Summer Arrangement, 1850.

Outward Trains from Boston

For Portland at 7, 11, am. and 4½ pm.
For Great Falls at 7, 11, am., 4½ pm.
For Haverhill at 7, 9, 11 am., 2½, 4½, 6½, pm.
For Lawrence (South Side,) 7, 11 am., 2½, 4½, pm.
" (North ") 7½, 9, a.m. 12m., 5, 6½, p.m.
For Reading 7, 9, 11 am. 12m. 2½, 4½, 5, 6½, 7½, 9½ pm.
The Station in Boston is on Haymarket Square.

THOS. S. WILLIAMS, Super't.

July 1, 1850.

EASTERN RAILROAD.

SUMMER ARRANGEMENT.

On and after Monday, June 17th, 1850, trains will leave Boston daily (Sundays excepted);

For Lynn, 7, 9½, 11 a.m., 12 m., 2½, 4½, 5, 6, 7 p.m.
Salem, 7, 9½, 11, a.m., 12 m., 2½, 3, 4½, 6, 7 pm.
Manchester and Gloucester, 9½ a.m., 3, 6 p.m.
Marblehead, 7, 9½, 12 a.m. 2½, 4½, 6, 7 p.m.
Ipswich, 7, 11, 12 a.m., 2½, 4½, 7 p.m.
Newburyport, 7, 11, 12 a.m., 2½ 4½, 7 p.m.
Portsmouth, 7, 11 am., 4½, pm.
Portland, Me., 7, 11 am., 4½, pm.

And for Boston,

From Portland, 5, 10½ am., 5 pm.
Portsmouth, 7½,* am., 1, 7½*, pm.
Newburyport, 6½, 8*, 11½ am., 1½*, 5, 8 pm.
Ipswich, 7·40, 8·35, 11·42 a.m. 2·20, 5·22, 8½.
Gloucester, 7½, am., 1½, 8 pm.
Manchester, 7 am., 2 pm.,
Salem, 6½, 7½*, 8½*, 9½, 10½ am., 12½*, 2½* 3,* 6*, 9*, pm.
Lynn, 6½, 7½*, 8½*, 9½, 10½ am., 12½*, 2½*, 3½ 6½*, 9½* pm.

**Or on their arrival from the East.*

Freight trains each way daily. Office 17 Merchants' Row, Boston.

JOHN KINSMAN, Superintendent.

ALBANY AND BUFFALO RAILROADS.—Four Trains daily, Sundays excepted, viz:
Leave Albany, 6 a.m., 9 a.m., 2 p.m., 7 p.m.
Reach Buffalo, 15 hours, 18 hours, 23 hours, 18 hours.
Arrive from Buffalo, 7 p.m., 2½ a.m., 12½ m., 3½ p.m.

Passengers by the *Express Train* reach Buffalo from New York, and New York from Buffalo, in 24 hours. The Isaac Newton and Oregon connect at Albany with this Train. Baggage cars, with careful baggage masters, run through with all the trains.

For Schenectady, Saratoga Springs & Whitehall,

Leave Albany at 7 a.m. and 2 p.m. For Schenectady only at 6, 7 and 9 a.m. and 12½, 2 and 7 p.m. For Erie Canal packets at 7 a.m. and 7 p.m. By Plank Road from Schenectady to Saratoga at all hours by stages, etc.

The *Eastern Trains* leave Albany at 7 a.m. and 3 p.m. The wagons of the company take baggage *free* between railroads and steamboats at Albany.

E. FOSTER, Jr., Sec'y
Albany and Schenectady Railroad Co.
Albany, August, 1849.

NEW YORK AND HARLEM RAILROAD.

WINTER ARRANGEMENT.

On and after Monday, October 21st, 1850, the Cars will run as follows, (Sundays excepted) until further notice:

Trains will leave the City Hall, New York, for—
Harlem and Mott Haven, 7½, 10, 11½ a.m., 1½, 3, 3½, 4, 4½, 5½, 6½, 10½ p m.
Morrisania Village, 7½, 10, am., 1½, 3½, 4½, 5½, 6½, 10½, pm.
Fordham, 7½, 8½, 10, am., 1½, 2½, 3½, 4½, 5½, 6½, 10½, pm.
Williams' Bridge, 8½, 10, am., 2½, 3½, 4½, 6½ pm.
Hunt's Bridge, Bronxville, Scarsdale and Hart's Corners, 8½, 10 am., 3½, 4½ pm.
Tuckahoe and White Plains, 8½, 10 am., 2½, 3½, 4½, pm.
Pleasantville, New Castle, Bedford, Mechanicsville, Purdy's, Croton Falls, and intermediate stations, on signal, 8½ am., 2½, 3½ pm.
Brewster's, Towner's, Patterson, Paulding's, South Dover, Dover Furnace, and Dover Plains, 8½ am., 2½ pm.

NOTICE—The trains leaving City Hall for Fordham at 7 30 am., and 1 30, 5 30 and 6 30 pm., and for Mott Haven and Harlem at 7 30 and 11 30 am., and 1 30, 4, 5 30 and 6 30 pm.; returning from Fordham, 5 45, 7 15 and 9 am., and 3 and 7 pm., and Mott Haven and Harlem, 6 05, 7 30, 9 15 am., 12 30, 3 16, 5 15, 7 15 pm., are Local Accommodation trains, for which there is a special reduced rate of commutation.

Passengers are reminded of the great danger of standing upon the platform of the cars, and they are hereby notified that the practice is contrary to the rules of the Company, and that they do not admit any responsibility for injury sustained by any passenger upon the platforms, in case of accident.

Returning to New York will leave
Harlem and Mott Haven, 6, 7½, 8 35, 9½, 10 20, am., 12½, 3 05, 3½, 5½, 7½ pm.
Morrisiana Village, 5 53, 7 23, 8 28, 9 08, 10 13 am., 2 58, 3 08, 5 05, 4 08 pm.
Fordham, 5½, 7½, 8 20, 9, 10 05, 10½ am., 2 50, 3, 5, 7 pm.
William's Bridge, 5 40, 8½, 10, 10 40 am., 2½, 4½ pm.
Hunt's Bridge, 8 06, 9 50, am., 2 36, 4 38, pm. On signal.
Bronxville, 7 58, 9 41 a.m., 2 28, 4 32 p.m. On signal.
Tuckahoe, 7 55, 9 36, 10 24 am., 2 25, 4 29 pm.
Scarsdale, 7 45, 9 25 am., 2½, 4 20 pm. On signal.
Hart's Corners, 7 37, 9 17 am., 2 07, 4½ pm. On signal.
White Plains, 7½, 9 10, 10 am., 2, 4 10 pm.
Kisco, 8 55, 9 52 am., 4 03 pm. On signal.
Unionville, 8 42, 9 44 am. 3 55 pm. On signal.
Pleasantville 8 35, 9 38 am., 3 48 pm.
Chapaqua, 8 27, 9 32 am. 3 42 pm. On signal.
New Castle, 8½, 9 21 am., 3 32 pm.
Bedford, 8 05, 9½, am., 3 26 pm.
Mechanicsville 7 55, 9 08 am., 3 19 pm.
Golden's Bridge, 7 43, 9 02 am. 3 14 p.m. On signal.
Purdy's 7 35, 8 55 am., 3 87 pm.
Croton Falls, 7½, 8 59 am., 3 02 pm.
Brewster's, 8 35 am., 2 49 pm.
Towner's, 8 20 am., 2 34 pm.
Paterson, 8 12 am., 2 26 pm.
Paulding's, 8 02 am., 2 16 pm.
South Dover, 7 47 am., 2 02 pm.
Dover Furnace, 7 40 am., 1 55 pm.
Dover Plains, 7½ am., 1½ pm.

Passengers from the stations between Twenty-seventh st. and Fordham, "going above White Plains," will take the Accommodation trains to Fordham, at 7 30 am., and 1 30 pm., and the Dover Plains train will not stop below Fordham.

The trains leaving City Hall at 7 30, 10, 11 30, 1 30, 4, 5 30, 6 30, 10 30—returning leaving Mott Haven and Harlem at 6, 7 30, 9 15, 12 30, 3 05, 3 15, 5 15, 7 15, will land and receive passengers at 27th, 42d, 50th, 61st, 79th, 86th, 109th, 115th, 125th and 132d streets.

The Dover Plains train from New York at 8 15 am. and 2 30 pm.—returning leaving Dover Plains at 7 30 am., will not stop between White Plains and New York (except at Tuckahoe, Williams' Bridge and Fordham) unless to land passengers coming from above Croton Falls—and no fare collected less than Fordham fare.

A car will precede each train ten minutes to take up passengers in the city. The last car will not stop, except at Broome st. and 27th street.

The Freight Trains will leave New York at 12 m. Returning, will leave Dover Plains at 2 pm. daily.—An Extra freight train will leave New York on Mondays, Wednesdays and Fridays at 9 am. Returning, will leave Dover Plains Tuesdays, Thursdays and Saturdays at 8 o'clock am.

For Sunday Aarrangements, see hand bills.

M. SLOAT, Sup't.

NEW YORK & ERIE RAILROAD.

Winter Arrangement, 1850.

Steamboats leave daily, Sundays excepted, from the pier foot Duane st., at 7 a.m., and 4 p.m., for Piermont, there connecting with the new and comfortable broad gauge cars of this road, running to Jefferson at the head of Seneca Lake in 14 hours, where passengers take the new and splendid steamer Benj. Loder for for Geneva. At Geneva they take any o the trains of the central line for Rochester, Buffalo, and the west.

Breakfast and supper on board the steamboats at each end.

Express freight trains daily over the whole road in 26 hours.

FARES.

Between New York and Buffalo,		$9 85
"	" Geneva,	6 00
"	" (second class,	4 50

CHAS. MINOT, Supt.

December 2, 1850.

NORTHERN RAILROAD, *NEW YORK.*

CARS run between Rouses Point and Chateaugay daily, Sundays excepted, as follows:

Leave Rouses Point at . . 3½ A.M.
Leave Chateaugay at . . 6½ P.M.

On the arrival of the cars at Chataugay, stages are in readiness to take the passengers to Ogdensburg, where they arrive the same day.

Passengers leave Ogdensburg in the morning by stage, and take the evening train from Chataugay to Rouses Point, where they go immediately on board the steamboats which run north and south on Lake Champlain.

Passengers leaving New York in the evening by the way of Whitehall, will arrive at Rouses Point the next night, and the next morning pass directly from the boat to the cars, and arrive at Ogdensburg the same day. CHARLES L. SCHLATTER, Supt.

WESTERN AND ATLANTIC RAILROAD,

FROM ATLANTA, GA., TO CHATTANOOGA, TENN. 140 Miles.

PASSENGER SCHEDULE.

Leave Chattanooga daily, Sundays excepted, at 8½ a.m.
Arrive at Kingston . . . by 12 m.
" Dalton . . . by 3 p.m.
" Chattanooga . . . by 6 "
Leave Chattanooga daily, Sundays excepted, at 7 a.m.
Arrive at Dalton . . . by 9½ "
" Kingston . . . by 12 m.
" Atlanta . . . by 4 p.m.

The fare is now permanently reduced to *three* cents per mile for way as well as through Passengers; children and servants *two* cents per mile.

There are two Railroad routes from Atlanta to the Seaboard, viz: one by the Georgia Railroad to Augusta, and thence to Charleston by the South Carolina Railroad; the other by the Macon and Western Railroad to Macon, and thence to Savannah by the Central Railroad.

At Kingston, 60 miles north of Atlanta, the Rome Railroad branches off to Rome on the Coosa river, which admits of steamboat navigation as far down as Greensport in Ala. Mail stages are in operation from Rome leading towards Tuscaloosa, Ala., Columbus, Miss., Memphis, Tenn., etc.

At Dalton, 100 miles north of Atlanta, a line of stages branches off to Knoxville, Tenn., which will be superseded by the East Tennessee and Georgia Railroad as rapidly as the same is completed.

At Chattanooga a number of steamboats are in successful operation on the Tennessee river, and from that terminus of the road stages run to Nashville, which will be superseded by the Nashville and Chattanooga Railroad as rapidly as the same is completed.

WM. D. FULLTON, Supt. Transp.
Transportation W. & A. R. R.,
Atlanta, March, 1850.

GREAT NORTHERN & SOUTHERN MAIL ROUTE.

From New York to Charleston, S. C. daily, via *Philadelphia, Baltimore, Washington City, Richmond, Petersburg, Weldon and Wilmington, N. C.*

Travellers by this route, leaving New York at 4½ p. m., Philadelphia at 10 p.m., and Baltimore at 6 a.m., proceed without delay at any point on the route, arriving at Richmond, Va., in a day, and at Charleston, S. C., in two and half days from New York.

Through tickets from New York to Charleston, $20 00
" " Baltimore to Richmond, 7 00
" " " Petersburg, 7 50

For tickets to Richmond and Petersburg, or further information, apply at the *Southern Ticket Office, adjoining the Washington Railroad Ticket Office, Pratt Street, Baltimore.* STOCKTON & FALLS.

LITTLE MIAMI RAILROAD.—SUMMER ARRANGEMENT.

Cincinnati and Sandusky.

FIRST Passenger Train leaves Depot on East Front street, at 5 o'clock 10 minutes A. M. stops for breakfast at Morrow, and arrives at Springfield at 11 10 A M. Leaves Springfield for Sandusky at 11 50 A. M.

Second Passenger Train leaves Depot 3 P. M. arrives at Springfield at 9 P.M. Passengers take tea at Springfield, and leaves for Sandusky at 9½ P. M.

RETURNING—First Train leaves Springfield at 4 A. M. Stop for breakfast at Xenia, and arrives at Cincinnati at 10 15 A. M.

Second Train leaves Springfield at 2½ P. M. Stop for tea at Morrow, and arrives at cincinnati, at 8½ P. M.

Passengers taking the Morning Train arrive at Sandusky at 9 P. M. Those taking the Afternoon Train arrive at 7½ A. M. next morning, and proceed directly on in the boats.

Passengers for columbus, Zanesville, Wheeling, and intermediate towns, should take the 5, 10 A. M., Train.

The Ohi Stage Company are running the following Lines in connection with the Trains:

A Daily Daylight Line to Columbus from Springfield in connection with the Morning Train from Cincinnati. Also, Daily Lines to Columbus, from Xenia and Springfield, connecting with the 3 o'clock pm. train from Cincinnati.

Fare from Cincinnati to Xenia . . $1 90
" " Springfield . . 2 50
" " Sandusky city . 6 50
" " Buffalo . . 10 00
" " Columbus . . 4 50

For other information and through tickets, apply at the Ticket Office on Broadway, near Front-st., Cincinnati.

W. H. CLEMENT, Superintendent.

☞ The Company will not be responsible for Baggage exceeding 50 dollars in value, unless the same is returned to the Conductors or Agent, and freight paid at the rate of a passage for every 500 dollars in value above that amount.

PHILADELPHIA, WILMINGTON, & BALTIMORE RAILROAD.

Summer Arrangement.
April 1st, 1849.—Fare $3.

Leave Philadelphia 8½ am., and 10 pm.
Leave Baltimore 9 am, and 8 pm.
Sunday—Leave Philadelphia at 10 pm.
" Baltimore at 8 pm.
Trains stop at way stations.

Charleston, S. C.

Through tickets Philadelphia to Charleston, $20.

Pittsburg and Wheeling.

Through ticket, Philadelphia to Pittsburg, $12.
" " Wheeling, 13.
Through tickets sold at Philadelphia office only.

Wilmington Accommodation.

Leave Philadelphia at 12 m. 4 and 7 pm.
Leave Wilmington at 7½ am., 4½ and 7 pm.

Newcastle Line.

Leave Philadelphia at 2½ pm.—Baltimore at 1½ pm
Fare $3.—Second class, $2.
N.B.—Extra baggage charged for.

I. R TRIMBLE, Gen. Supt.

BALTIMORE AND SUSQUEHANNA RAILROAD.—Reduction of Fare. Morning and Afternoon Trains between Baltimore and York.—The Passenger Trains run daily, except Sundays, as follows:

Leave Baltimore at . . . 9 am. and 3½ pm.
Arrive at . . . 9 am. and 6½ pm.
Leave York at . . . 5 am. and 3 pm.
Arrive at . . . 12½ pm. & 8 pm.
Leave York for Columbia at . 1½ pm. & 8 am.
Leave Columbia for York at . 8 am. & 2 pm.

Fare:

Fare to York . . . $1 50
" Wrightsville . . . 2 00
" Columbia . . . 2 12½
Way points in proportion.

PITTSBURG, GETTYSBURG, AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg . . . $9
Or via Lancaster by railroad . . . 10
Through tickets to Harrisburg, or Gettysburg . 3
In connection with the afternoon train at 3½ o'clock, a horse car is run to Green Spring and Owing's Mill, arriving at the Mills at . . 5½ pm.
Returning, leaves Owing's Mills at . . 7 am.

D. C. H. BORDLEY, Sup't.
31 1y Ticket Office, 63 North st.

PHILADELPHIA & READING RAILROAD

Passenger Train Arrangement for 1850.

A Passenger Train will leave Philadelphia and Pottsville daily, except Sundays, at 9 o'clock a.m.

The Train from Philadelphia arrives at Reading at 12 18 m.

The Train from Pottsville arrives at Reading at 10 43 a.m.

Fares.	Miles.	No.1.	No.2.
Between Philad. and Pottsville,	92	$3·50 and	$3·00
" " Reading,	58	2·25	1·90
" Pottsville "	34	1·40	1·20

Five minutes allowed at Reading, and three at other way stations.

Passenger Depot in Philadelphia corner of Broad and Vine streets. 8tf.

BALTIMORE AND OHIO RAILROAD AND WASHINGTON BRANCH.

On and after January 1, 1850, Passenger Trains will run as follows:

Leave Baltimore for Ellicott's Mills, Frederick, Harper's Ferry, Martinsburg, Hancock and Cumberland, every morning at 7½ o'clock. This line carries the Great Mail, and connects with Post Coaches at Cumberland, for Wheeling and Pittsburg, over the National Road. Also with the Winchester Trains, at Harper's Ferry. N.B.—Passengers for Pittsburg take the steamers of the Monongahela slack water navigation at *Brownsville*, only 76 miles from Cumberland.

Leave Baltimore for Ellicott's Mills, Frederick and Harper's Ferry, daily, except Sunday, at 4½ p.m.

Leave Baltimore for Washington City, daily, at 6 a.m. and 5 p.m.—daily, except Sunday, at 9 a.m. The early train connects with the Great Southern Line, via Fredericksburg and Richmond, to Charleston.

Leave Cumberland for Baltimore, etc., at 8½ a. m., daily, connecting with the train from Winchester at Harper's Ferry—with the Evening Train to Washington City, at the Relay House—and with the Evening Train to Philadelphia, at Baltimore. Time for arriving at Baltimore, 5½ p.m.

Leave Harper's Ferry for Baltimore, daily, except Sunday, at 7½ a. m—taking in Passengers who leave Frederick at 8½ a.m.

Leave Washington for Baltimore, daily, at 6 a.m. & 5½ p.m., and *daily, except Sunday*, at 9½ a. m. The early train connects at the Relay House with the morning line to Cumberland and the West, and at Baltimore with the day line to Philadelphia and New York.

Through tickets are sold at *Philadelphia and Baltimore* for Pittsburgh and Wheeling, and at *Philadelphia and New York* for Charleston, S. C., at the following

RATES OF FARE.

	To Pittsburg. In winter.	Summer.	Wheeling. Win.	Sum.	Charleston.
From Philadelphia,	$13	$12	$14	$13	$20
" Baltimore,	11	10	12	11	
" New York, . . .					20

Passengers leaving New York not later than the afternoon line via Newark, etc., reach Baltimore in season to take the next morning's lines to the South and West.

Passengers leaving Cumberland in the morning and Washington in the evening lines, reach Baltimore in season to proceed to Philadelphia by the evening train at 8 p. m.—so as to reach New York before noon the next day.

An Emigrant line by burthen cars, leaves Baltimore every morning, except Sundays, at 4 o'clock—connecting with a line of the previous day from N. York—and at Cumberland with a wagon line to Pittsburg or Brownsville and Wheeling. Fare by this line:

From New York to Pittsburg, $8 00
" Philadelphia " 6 50
" Baltimore " 5 00

By order, J. T. ENGLAND, Agent.

SOUTH CAROLINA RAILROAD.—A Passenger Train runs daily from Charleston, on the arrival of the boats from Wilmington, N. C., in connection with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tuscumbia Railroad in N. Alabama.

Fare through from Charleston to Montgomery daily . . . $26 50
Fare through from Charleston to Huntsville, Decatur and Tuscumbia . . 22 00

The South Carolina Railroad Co. engage to receive merchandize consigned to their order, and to forward the same to any point on their road; and to the different stations on the Georgia and Western and Atlantic Railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad.

JOHN KING, Jr., Agent.

FAIRBANKS' RAILROAD SCALES.—THE subscribers are prepared to construct at short notice, *Railroad* and *Depot Scales*, of any desired length and capacity. Their long experience as manufacturers—their improvements in the construction of the various modifications, having reference to strength, durability, retention of adjustment, accuracy of weight and dispatch in weighing—and the long and severe tests to which their scales have been subjected—combine to ensure for these scales the universal confidence of the public.

No other scales are so extensively used upon railroads, either in the United States or Great Britain;—and the managers refer with confidence to the following in the United States.

Eastern Railroad.	Boston & Maine Railroad.
Providence Railroad.	Providence and Wor. Road.
Western Railroad.	Concord Railroad.
Old Colony Railroad.	Fitchburg Railroad.
Schenectady Railroad.	Syracuse and Utica Road.
Balt. and Ohio Railroad.	Baltimore and Susq. Road.
Phila. & Reading Road.	Schuylkill Valley Road.
Central (Ga.) Railroad.	Macon and Western Road.

New York and Erie Railroad.

And other principal Railroads in the Western, Middle and Southern States.

E. & T. FAIRBANKS & CO.
St. Johnsbury, Vt.

Agents, { FAIRBANKS & Co., 89 Water St., N. York. / A. B. NORRIS, 196 Market St. Philadelphia.

April 22, 1849. 1y*17

Hydraulic Cement.

KINGSTON LIME AND CEMENT CO.
OFFICE
271 PEARL-ST.
N. Y.

HYDRAULIC CEMENT, OF BEST QUALITY, manufactured at their works, for sale in lots to suit purchasers.

Also, Ground Lime, a superior article for Builders.

ISAAC FRYER, Sec'y.

January 19, 1850. 1y

NORRIS' LOCOMOTIVE WORKS,
SCHENECTADY, N. Y.

THESE Works are in full operation in Manufacturing to order, Locomotive Steam Engines & Tenders, of the best principle and construction of material, using wrought iron heavy frames with pedestals welded thereto, and all parts of the engine made of the best wrought iron, except cylinders, pumps and boxes—obtaining greater durability, and carrying less weight over the road, than engines constructed of cast iron.

Wrought Iron Tires made any required size, and Tire Bars bent and welded with dispatch.

Chilled Wheels for Cars, Tucks and Tenders, made from the toughest iron.

Driving and Tender and Car Wheels fitted to Axles with Brass Boxes and Springs, and Railroad Machinery generally. Manufactured and for sale by

April 11, 1849. E. S. NORRIS.

CORROSIVE SUBLIMATE.

THIS article now extensively used for the preservation of timber, is manufactured and for sale by POWERS & WEIGHTMAN, manufacturing Chemists, Philadelphia.

Jan. 20, 1849.

Nashua Iron Co.,
NASHUA, NEW HAMP HIRE.

MANUFACTURERS of Bowling, Pembroke and Lowmoor Locomotive Tires, Engine Frames, Crank and Car Axles, Wrought Iron Shafting of all sizes, Shapes of all descriptions used in Machine shops and upon Railways.

FRANKLIN MONROE, Treasurer.

Messrs. Fullerton & Raymond, Agents, Boston.
" Raymond & Fullerton, " New York.

Orders received by the Treasurer at Nashua, N.H., or by the Agents in Boston or New York.

CENTRAL RAILROAD FROM SAVANNAH TO MACON, (Ga.) 190½ miles.

Passenger Trains leave Savannah and Macon daily at 7 a.m.

Passenger trains arrive daily at Savannah, 6 15 p.m.
" " " " Macon, 6 45 p.m.

This road, in connection with the Macon and Western road from Macon to Atlanta, and the Western and Atlantic road from Atlanta to Dalton, now forms a continuous line of 391½ miles in length* from Savannah to Dalton, Murray county, Ga. and with the Memphis Branch railroad, and Stages connect with the following places:

Tickets from Savannah to Macon,		$5 75
" " "	Atlanta,	9 50
" " "	Augusta,	6 50
" " "	Columbus,	15 00
" " "	Opelika,†	17 00
" " "	Jacksonville, Ala.,	20 00
" " "	Talladega,	
" " "	Huntsville, Ala.,	22 00
" " "	Decatur,	
" " "	Tuscumbia, Ala.,	22 50
" " "	Tuscaloosa, Ala.,	
" " "	Columbus, Miss,	28 00
" " "	Aberdeen, "	
" " "	Holly Springs	
" " "	Nashville, Tenn.	
" " "	Murphreesboro'	25 00
" " "	Columbia, do.,	
" " "	Memphis, do.,	30 00

An extra Passenger Train leaves Savannah on Saturdays, after the arrival of the Steam-ships from New York, for Macon, and connects with the Macon and Western railroad; and on Tuesdays, after the arrival of the Macon and Western cars, an extra Passenger Train leaves Macon to connect with the Steam ships for New York

Stages for Tallahasse and intermediate places connect with the road at Macon, Mondays, Wednesdays, and Fridays, and with Milledgeville at Gordon daily.

Passengers for Montgomery, Mobile and New Orleans take stage for Opelika from Barnesville through Columbus a distance of 97 miles, or from Griffin thro' West Point, a distance ot 93 miles.

* The Western and Atlantic railroad will soon be completed between Dalton and Chattanooga, a distance of 423½ miles from Savannah, of which due notice will be given.

† Head of the West Point and Montgomery railroad, on which the fare to Montgomery is about $2.

RATES OF FREIGHT FOR MERCHANDIZE GENERALLY, FROM SAVANNAH TO MACON.

Measurement Goods.—Boxes of hats, bonnets, furniture, shoes, saddlery, dry-goods, and other measurement goods, per cubic foot - - 13 cents.
Crockery Ware, in crates, boxes or hhds, per cubic foot. - - - - 10 "
Goods by Weight, 1st class.—Boxes of glass, paints, druga & confectionary, per 100 lbs., 50 "
2d class—Sugar, coffee, rope, butter, cheese, lard, tobacco, leather, hides, copper, sheet and hoop iron, tin, hard and hollow ware, rice, boxes soap and candles, bagging, and other heavy articles not enumerated below, per 100 lbs., - - - - 45 "
3d class—Flour, bacon, liquors, pork, beef, fish, tallow and beeswax, per 100 lbs., 40 "
4th class—Mill-gearing, pig and bar iron, grind and millstones, nails, spikes and coal, 100 lb. 30 "
Barrels of beets, bread, crackers, potatoes, ice, fruit, oysters, onions, and all light bbls, each, 75 "
Oil and molasses per hhd., (smaller casks in proportion) - - - $6 00 "
Salt per sack not exceeding 4 bushels, - 50 "

☞ Goods consigned to Thos. S. Wayne, Forwarding Agent, Savannah, will be forwarded free of commission. WM. M. WADLEY, Supt.

Savannah, Ga., February 24, 1850.

ENGINEERS' AND SURVEYERS'
INSTRUMENTS MADE BY
EDMUND DRAPER,
Surviving partner of
STANCLIFFE & DRAPER.

No 23 Pear street, near Third, below Walnut, Philadelphia.

GEORGIA RAILROAD. FROM AUGUSTA TO ATLANTA—171 MILES.

AND WESTERN AND ATLANTIC RAILROAD, FROM ATLANTA TO DALTON, 100 MILES.

This Road, in connection with the South Carolina Railroad, and Western and Atlantic Railroad, now forms a continuous line, 408 miles in length, from Charleston to Dalton Cross Plains) in Murray county, Ga. 32 miles from Chattanooga, Tenn.

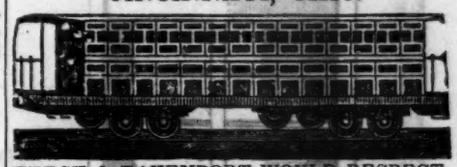
RATES OF FREIGHT.		Between Augusta and Dalton. 271 miles.	Between Charleston, and Dalton. 408 miles.
1st class	Boxes of Hats, Bonnets, and Furniture, per cubic foot - -	$0 18	$0 28
2d class	Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs, and Confectionary, per 100 lbs.	1 00	1 50
3d class	Sugar, Coffee, Liquor, Bagging, Rope, Cotton, Yarns Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow ware, Castings, Crockery, etc.	0 60	0 85
4th class	Flour Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc. - - -	0 40	0 65
	Cotton, per 100 lbs. -	0 45	0 70
	Molasses per hogshead -	8 50	13 50
	" " barrel - -	2 50	4 25
	Salt per bushel - -	0 18	
	Salt per Liverpool sack -	0 65	
	Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows - -	0 75	1 50

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Company will be forwarded free of commissions. Freights payable at Dalton. F. C. ARMS,

44*1y Sup't of Transportation.

CAR MANUFACTORY
CINCINNATI, OHIO.



KECK & DAVENPORT WOULD RESPECTfully call the attention of Railroad Companies in the West and South to their establishment at Cincinnati. Their facilities for manufacturing are extensive, and the means of transportation to different points speedy and economical. They are prepared to execute to order, on short notice, Eight-Wheeled Passenger Cars of the most superior description. Open and Covered Freight Cars, Four or Eight-Wheel Crank and Lever Hand Cars, Trucks, Wheels and Axles, and Railroad Work generally.

Cincinnati, Ohio, Oct. 2, 1848. 44ti

NICOLL'S PATENT SAFETY SWITCH FOR

Railroad Turnouts. This Invention for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design. It acts independently of the main track rails; being laid down or removed without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two castings and two rails; the latter, even if much worn or used, not objectionable.

Working models of the Safety Switch may be seen at Messrs. Davenport, Bridges & Kirk's Cambridge Port, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained, on application to the Subscriber, Inventor and Patentee.

G. A. NICOLLS,
Reading, Pa.

FOWLER M. RAY'S
METALLIC INDIA RUBBER CAR SPRINGS.

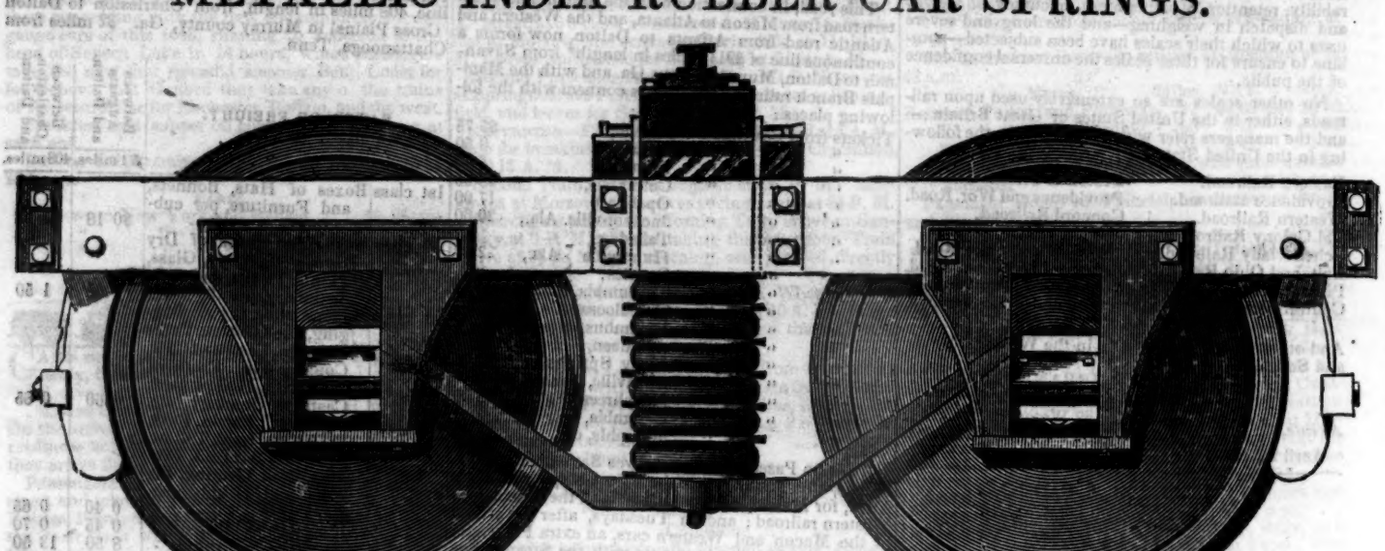


Fig. 1.

Fig. 2.

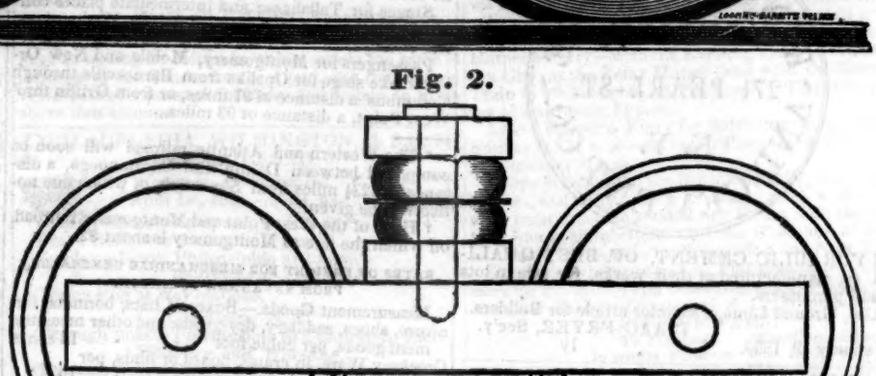
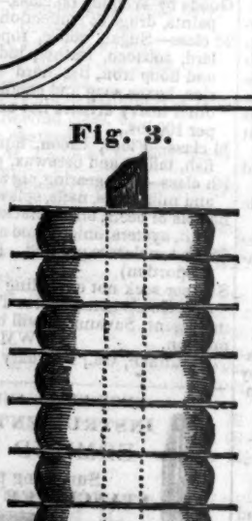


Fig. 3.



So much has been published for the purpose of misleading the public in regard to the inventorship of the India-rubber Railroad Spring, patented in the United States by Mr. W. C. Fuller, that the New England Car Company, proprietors of this invention, have deemed it proper, for the information of Railroad Companies, Car Builders and the public generally, to lay before them the facts upon which they found their claim to this invention, and to a Patent therefor.

Cut No. 1, Represents a cross section of the first model made by Mr. Tucker, under the direction of Mr. Ray, in the summer of 1844, and to which Mr. Tucker, Mr. Bradley and Mr. Bannester testify as being the model marked "B."

Cut No. 2, Represents the model made in 1845, to which Mr. Osgood Bradley and Gen. Thos. W. Harvey have testified.

Cut No. 3, Represents a rough sketch made by Mr. Ray in 1844, which he gave to a man about departing for England to take out some patents, who promised to write to Ray after his arrival in that country—which promise he has probably forgotten.

Mr. W. C. Fuller, of England, patented the above Spring in that country on the 23d October, 1845. He filed his enrollment April 23d, 1846, and on the 22d October, 1846, he took out a patent in the United States under the title, "For Improvement in Railway Carriages," when the improvement consisted in the spring, and not in the carriage.

The reader will perceive by the annexed testimony, that the India-rubber Railroad Car Spring was invented by Mr. Ray about two years previous to the date of Mr. Fuller's enrollment.

The Depositions are omitted for want of room, but will be published in full in the course of a few weeks.

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